

1958

Alcoa Architectural Stocks

ALUMINUM COMPANY OF AMERICA

standard warehouse items

installation details

specifications

Alcoa Architectural Stocks

Revised 1958

ALUMINUM COMPANY OF AMERICA

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THIS IS A CATALOG OF ALCOA ALUMINUM ARCHITECTURAL WAREHOUSE STOCKS

It lists and illustrates items of aluminum immediately available from Alcoa Distributors and Jobbers throughout the United States. Warehouse stocks include those standard items, sizes and alloys generally specified by architects and regularly selected by architectural metal, sheet metal and building product fabricators. The list following gives the location of the Alcoa Distributor or Jobber nearest you.

Where practical throughout the book, items are shown full size along with dimensions and other pertinent data necessary for designing, ordering and fabricating. Installation details and procedures, as well as suggested specifications, are included for many of the products.

These stock items are supplied by your Alcoa Distributor or Jobber as received from the mill. Further processing to meet the architect's design and specification—such as additional fabricating, finishing or application of protective coatings, where required, must be performed by the aluminum fabricator.

Sizes indicated for the various items are "warehouse standards." Smaller increments of size can be supplied, since most Distributors and Jobbers are equipped to cut stock sizes to desired dimensions.

Your local Alcoa Distributor or Jobber is prepared to fulfill your aluminum requirements promptly and efficiently.

warehouse locations

Alcoa Distributors and Jobbers

ALABAMA— BIRMINGHAM

*Hinkle Supply Company, Inc.
2923 Fifth Avenue, South

ARIZONA— PHOENIX

Ducommun Metals & Supply Co.
2626 E. Washington Street

CALIFORNIA— BERKELEY

Ducommun Metals & Supply Co.
2550 Seventh Street (10)

The Kawneer Co.
930 Dwight Way

LOS ANGELES

Acme Metal Molding Co.
1923 S. Los Angeles St.

*Ducommun Metals & Supply Co.
4890 South Alameda Street (54)

Pacific Metals Company, Ltd.
2187 South Garfield Avenue (22)

SAN DIEGO

Ducommun Metals & Supply Co.
1300 Wilson Street

SAN FRANCISCO

*Pacific Metals Company, Ltd.
1900 Third Street (7)

COLORADO— DENVER

Marsh Steel Corporation
5500 Colorado Boulevard (16)

Metal Goods Corporation
4343 Holly Street

CONNECTICUT— HAMDEN

The H. A. Leed Company
1685 Dixwell Avenue (14)

MILFORD

*Edgcomb Steel of New England, Incorporated
950 Bridgeport Avenue

WINDSOR

Whitehead Metal Products Company, Inc.
Hartford-Springfield Expressway

FLORIDA— JACKSONVILLE

The J. M. Tull Metal & Supply Co., Inc.
P. O. Box 6295
West Bay Station
Warehouse Location: 5336 Highway Ave. (5)

FLORIDA— MIAMI

The J. M. Tull Metal & Supply Co., Inc.
P.O. Box 218
3690 N. W. 52nd Street

TAMPA

The J. M. Tull Metal & Supply Co., Inc.
P. O. Box 11516
Warehouse Location: 2736 E. Hanna St. (10)

GEORGIA— ATLANTA

American Art Metals Co.
433 Highland Ave., N. E.

Southern Aluminum Finishing Co.
1581 Huber Street, N. W.

*The J. M. Tull Metal & Supply Co., Inc.
P.O. Box 4628
285 Marietta Street, N. W. (3)

IDAHO— BOISE

Pacific Metal Company
325 Grove Street

ILLINOIS— CHICAGO

J. G. Braun Co.
609-15 S. Paulina St.

*Central Steel and Wire Company
P.O. Box 5310-A
3000 West 51st Street (80)

*The Corey Steel Company
2800 S. 61st Court (50)

*Steel Sales Corporation
3348 South Pulaski Road (80)

INDIANA— INDIANAPOLIS

Aluminum Finishing Corp.
1012 East 21st St. (2)

Steel Sales Co. of Indiana, Inc.
2185 North Sherman Drive (18)

KANSAS— WICHITA

Marsh Steel Corporation
900 East First Street

Metal Goods Corporation
2971 South Madison Street (16)

KENTUCKY— LOUISVILLE

Williams and Company, Incorporated
1109 South Preston Street (3)

LOUISIANA— NEW ORLEANS

Metal Goods Corporation
432 Julia Street (12)

MARYLAND— BALTIMORE

Whitehead Metal Products Company, Inc.
4300 East Monument Street (5)

MASSACHUSETTS— CAMBRIDGE

Austin-Hastings Co., Inc.
226 Binney St. (42)

Whitehead Metal Products Company, Inc.
281 Albany Street (39)

ROXBURY

Eastern Metal Mill Products Co.
21 Vale Street

TAUNTON

National Glass Company, Inc.
Fourth Street

MICHIGAN— DETROIT

Aluminum Supply Co.
16011 W. McNichols Rd. (16)

Central Steel and Wire Company
P.O. Box 148
13400 Mount Elliott Avenue (12)

Steel Sales Co. of Michigan
5151 Wesson Avenue (10)

NILES

The Kawneer Company

MINNESOTA— MINNEAPOLIS

Steel Sales Co. of Minnesota
401 Harding Street, N. E. (13)

MISSISSIPPI— JACKSON

Metal Trims, Inc.

MISSOURI— KANSAS CITY, NORTH

*Marsh Steel Corporation
101 East Ninth Street (16)

Metal Goods Corporation
1300 Burlington Avenue (16)

ST. LOUIS

*Metal Goods Corporation
8800 Page Boulevard (14)

Steel Sales Co. of Missouri, Inc.
4565 McRee Avenue (10)

NEW HAMPSHIRE— NASHUA

*Edgcomb Steel of New England, Inc.
P. O. Box 437

NEW JERSEY— HARRISON

Whitehead Metal Products Company, Inc.
1000 South Fourth Street

HILLSIDE

Miller Steel Company, Inc.
40 Montgomery St.

CARLSTADT

Julius Blum & Co., Inc.
Box 92

KENILWORTH

Jones & Laughlin Steel Corp.—Strip Steel Division
Kenilworth Plant
750 Boulevard

NEW YORK— ALBANY

*Eastern Metals Warehouse, Inc.
P. O. Box 910 (1)

BUFFALO

Brace-Mueller-Huntley, Incorporated
1807 Elmwood Avenue (7)

Whitehead Metal Products Company, Inc.
2128 Elmwood Avenue (7)

LONG ISLAND CITY

*Adam Metal Supply, Inc.
4-63 48th Avenue (1)

NEW YORK CITY

J. G. Braun Co.
537-541 W. 35th St. (1)

Manhattan Brass & Copper Co.
150 Lafayette St. (13)

Simon & Mills, Inc.
25 Leonard St.

Strahs Aluminum Co., Inc.
79-81 White St. (13)

*Whitehead Metal Products Company, Inc.
303 West Tenth Street (14)

ROCHESTER

Brace-Mueller-Huntley, Incorporated
315 Hollenbeck Street (1)

Metal Supply, Inc.
112 Hudson Ave. (5)

Sachs Metal Supply Co.
774 W. Main St.

SYRACUSE

*Brace-Mueller-Huntley, Incorporated
P. O. Box 1340
Thompson Road (1)

Whitehead Metal Products Company, Inc.
207 West Taylor Street (4)

NORTH CAROLINA— CHARLOTTE

Edgcomb Steel Company
527 Atanda Avenue (6)

OHIO— CINCINNATI

Architectural Products Co.
610 West Fourth St. (3)

Central Steel and Wire Company
P. O. Box 148
525 Township Avenue (16)

Williams and Company, Incorporated
3231 Fredonia Avenue (29)

CLEVELAND

*Nottingham Steel & Aluminum Company
4510 Division Avenue (2)

Williams and Company, Incorporated
3700 Perkins Avenue (14)

COLUMBUS

Williams and Company, Incorporated
900 Williams Avenue (8)

DAYTON

Ohio Metal & Mfg. Co.
818 E. Monument St.

TOLEDO

Williams and Company, Incorporated
946 Kane Street (12)

OKLAHOMA— TULSA

Metal Goods Corporation
302 North Boston (3)

OREGON— PORTLAND

*Pacific Metal Company
303 N. W. Park Avenue (9)

PENNSYLVANIA— PITTSBURGH

*Williams and Company, Incorporated
901 Pennsylvania Avenue (33)

PHILADELPHIA

*Edgcomb Steel Company
"D" Street
below Erie Avenue (34)

Hardware & Metal Supply Co.
(Harry L. Sall & Co., Inc.)
967-973 North Ninth St. (34)

Lustrik, Inc.
3235 Frankford Ave. (34)

Metal Supply Co.
2440 Germantown Ave.

Whitehead Metal Products Company, Inc.
1955-75 Hunting Park Avenue (40)

PENNSYLVANIA— YORK

Edgcomb Steel Company
420 Memory Lane

RHODE ISLAND— PAWTUCKET

Edgcomb Steel of New England, Inc.
1064 Main Street

Engineering Products & Specialties, Inc.
Dunnell Lane

TENNESSEE— MEMPHIS

Metal Goods Corporation
1970 Latham Street (6)

TEXAS— DALLAS

Metal Goods Corporation
6211 Cedar Springs Road (9)

HOUSTON

Metal Goods Corporation
711 Milby Street (3)

UTAH— SALT LAKE CITY

Pacific Metals Company, Ltd.
261 West Fifth, South (1)

VIRGINIA— RICHMOND

Hankins & Johann, Inc.
P. O. Box 7147 (21)

WASHINGTON— SEATTLE

Pacific Metal Company
4150 First Avenue, South (4)

WISCONSIN— MILWAUKEE

Central Steel and Wire Company
P. O. Box 1154
6623 West Mitchell Street (1)

Steel Sales Co. of Wisconsin
2400 West Cornell Street (9)

Wisconsin Bridge and Iron Company
5023 North 35th St.

HAWAII— HONOLULU

Aluminum Products—Hawaii
308 Ward Avenue (14)

*Home Office

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advantages of aluminum

light weight

The weight of aluminum is approximately one-third that of an equal volume of commonly used metals. Economies obtained from reduction of dead load, freight and handling charges, size of erection crews, and installation or erection times are substantial.

corrosion resistance

Aluminum is highly resistant to the corrosion of most industrial and seacoast atmospheres.

high strength

Alcoa Aluminum alloys have been developed to meet the most rigid specifications for high-strength applications in architecture.

high heat conductivity

Aluminum is a superior material when rapid thermal conduction is a requirement.

high electrical conductivity

The conductivity of aluminum alloy EC (electrical conductor) is 61 per cent I.A.C.S.* The current-carrying capacity is 84 per cent that of copper, which makes it ideal for electrical distribution systems.

*International Annealed Copper Standard

high reflectivity—light, radiant heat

The natural surface of aluminum has high reflectivity to both light and radiant energy in the invisible wave lengths. Special surface treatments can boost light reflectivity to 85% of the incident visible rays.

versatility

The wide range of forms in which aluminum is commercially produced makes this material adaptable to every architectural requirement. Common fabricating methods without special tools, the natural workability, and new welding methods extend this versatility to the fabricator and to the erector.

nonsparking

There are no inherent sparking qualities of aluminum which present explosion hazards.

fine appearance

The natural finish of aluminum in commercial forms as obtained from the mill is suitable for many architectural applications without further surface preparation. A variety of special finishes may be readily applied for decorative items.

for the architect, engineer and designer

	ALUMINUM TECHNICAL DATA	A.I.A. File No.
10507	Care During Construction	15-J
10508	Cleaning and Maintenance	13-E
10122	Alcoa Structural Handbook	
10031	Alcoa Aluminum Handbook	
	CURTAIN WALL DESIGN DATA	
	Architectural Achievements (folders, detail sheets) Series 100	17-A
10396	Architectural Visioning—Aluminum School	17-A
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10244	Alcoa Aluminum Fasteners and Screw Machine Products	
10661	Alcoa Aluminum Bus Conductor Handbook	
10283	Alcoa Aluminum Electrical Rigid Conduit	
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of special interest to the subcontractor and fabricator

PROCESSING
Alcoa Aluminum Alloys and Mill Products
Casting Alcoa Alloys
Designing for Alcoa Die Castings
Forming Alcoa Aluminum
Machining Alcoa Aluminum
Riveting Alcoa Aluminum
Welding Alcoa Aluminum
INSTALLATION MANUALS
Simplified Instructions for Proper Handling and Installation of:
Aluminum Windows in Commercial and Monumental Buildings—No. 53 CM;
Residential Casement Aluminum Windows—No. 54 RD; Residential
Double-hung Aluminum Windows—No. 54 RDH
(published by the Aluminum Window Manufacturers Association)

For other specialized technical data consult your nearest Alcoa sales office



technical data

table A typical mechanical properties of alloys

ALLOY NO. ①		ULTIMATE TENSILE STRENGTH (1,000 LB SQ IN.)	YIELD STRENGTH ② (1,000 LB SQ IN.)	SHEAR STRENGTH ③ (1,000 LB SQ IN.)
WROUGHT ALLOYS	1100-H14	18	17	11
	1135	12	4	8
	2024-T4	14	13	9
	3003-H14	16	15	10
	Alclad 3003-H14	68	47	41
	3004-H34	22	21	14
	5050-H34	22	21	14
	5052-H34	35	29	18
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SAND CASTING ALLOYS	43-F	19	8	14
	214-F	25	12	20
	B214-F	20	13	17
	F214-F	21	12	17
	356-T6	33	24	26

Mechanical properties are obtained on ASTM specimens. Since minimum guaranteed values vary with the commodity, these values are not given.

For all Alcoa alloys, wrought and cast, the following data apply: (a) Young's modulus of elasticity may be taken as 10,300,000 lb per sq in.; (b) Modulus of rigidity may be taken as 3,800,000 lb per sq in.; (c) Poisson's ratio is .33; (d) Bearing strength is equal to 1.8 times the tensile strength, provided the edge distance, in the direction of stressing, is not less than twice the diameter of the hole.

① Other tempers from soft to full hard are available offering varying properties.

② Yield strength is the stress at which the material exhibits a permanent set of .2 per cent.

③ Shearing strengths are single-shear values obtained from double-shear tests.

table B guide for selection of alloys

COMMERCIAL FORM	GENERAL-PURPOSE ALLOYS		ALLOYS FOR APPEARANCE MATCH
	REGULAR DUTY	HIGHER STRENGTH	
SHEET AND PLATE	1100 3003 Alclad 3003	5050 5052	No. 32 Alumilite* Sheet—Best appearance match with 6063 extrusions, tube and pipe, and 214 castings after Alumilite treatment. ④ Alcoa® Anoclad Sheet Type 10—Appearance match with Alcoa Anoclad Extrusions Type 10 in Alcoa Architectural Color Finishes, 10 series. ① ④ Alcoa Anoclad Sheet Type 20—Appearance match with Alcoa Anoclad Extrusions Type 20 in Alcoa Architectural Color Finishes, 20 series. ② ④ Alcoa Anoclad Sheet Type 30—Appearance match with Alcoa Anoclad Extrusions Type 30 in Alcoa Architectural Color Finishes, 30 series. ③ ④ Alloy 1135—Appearance match where excessive grinding or mechanical finishing is required before Alumilite treatment. This alloy is subject to mild structural streakage.
	Alcoa No. 1 Porcelain Enameling Sheet—a new sheet alloy developed especially for application of porcelain enamel		
EXTRUSIONS	6063	6062	6063—Best appearance match with No. 32 Alumilite sheet, 6063 tube and pipe, and 214 castings after Alumilite treatment. Alcoa Anoclad Extrusion Type 10—Appearance match with Alcoa Anoclad Sheet Type 10 in Alcoa Architectural Color Finishes, 10 series. ① Alcoa Anoclad Extrusion Type 20—Appearance match with Alcoa Anoclad Sheet Type 20 in Alcoa Architectural Color Finishes, 20 series. ② Alcoa Anoclad Extrusion Type 30—Appearance match with Alcoa Anoclad Sheet Type 30 in Alcoa Architectural Color Finishes, 30 series. ③
	Alcoa No. 1 and No. 2 Porcelain Enameling Extrusions—new extrusion alloys developed especially for application of porcelain enamel		
TUBE & PIPE	3003	6063 6061	6063—Best appearance match with No. 32 Alumilite sheet, 6063 extrusions and 214 castings after Alumilite treatment.
SAND CASTINGS	43	356	43—Gray color after Alumilite treatment. 214—Best appearance match with No. 32 Alumilite sheet and 6063 extrusions, tube and pipe after Alumilite treatment.
STRUCTURALS	6061 Rolled & Extruded Shapes		
FASTENERS	2024 screws 6061 nails 1100 rivets: in order of 6053 increasing shear 6061 strength		2024—Available with Alumilite finish for extra corrosion resistance. Also available in colors corresponding to Alcoa Architectural Color Finishes.

NOTE: Most items available in range of strengths from fully annealed to fully hard or fully heat-treated. Wide choice of other Alcoa alloys available.

① 10 Series—Alcoa Architectural Gray 2010, Blue 3110, Gold 4010, Yellow 6010.

② 20 Series—Alcoa Architectural Gray 2020, Blue 3120, Brown 4020, Yellow 6020.

③ 30 Series—Alcoa Architectural Gray 2030.

④ These alloys should not be selected if grinding, belt sanding or other types of mechanical finishing are specified.

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*Registered Trade Name of Aluminum Company of America

table C

specification of finishes

unfinished

texture finishes

BRIGHT or BUFFED FINISH*—Smooth, highly lustrous surface.

Polished and buffed.....	A1
Buffed direct.....	A2

SATIN FINISHES*—Soft texture of parallel scratch lines in varying degrees of fineness.

Centerless belt polish, 180 emery (for tube).....	B
Belt polish, 180-220 emery.....	C1
Hand rubbed, steel wool.....	C2
Compound or brush back sander.....	C3
Belt polish, 160-180 emery.....	D
Belt polish, 120-140 emery.....	E

decorative-protective finishes

ALUMILITE FINISH*—Smooth, impervious electrochemical oxide coating that increases weather resistance and resists abrasion. Is generally applied to one of the texture finishes (mechanical or caustic soda-etched surfaces) and retains the natural color of aluminum. To assure a durable finish, the Alumilite treatment number, film thickness and coating weight should be specified.

APPLICATION	SHEET AND EXTRUSIONS			CASTINGS		
	ALUMILITE TREATMENT	MINIMUM COATING THICKNESS	MINIMUM COATING WT. PER SQ. IN.	ALUMILITE TREATMENT	MINIMUM COATING THICKNESS	MINIMUM COATING WT. PER SQ. IN.
INTERIOR USE						
Minimum Abrasion—(picture molds, interior fascia, balusters)	202	.00025"	12 mgm	702	.00025"	12 mgm
Medium Abrasion—(door frames, baseboards, window stools, hardware)	204	.0004"	17 mgm	704	.0004"	17 mgm
Maximum Abrasion—(handrails and fittings)	215	.0008"	35 mgm	714	.0006"	28 mgm
EXTERIOR USE						
Maintained—(storefronts, entrance trim)	204	.0004"	17 mgm	704	.0004"	17 mgm
Maximum Abrasion—(handrails and fittings)	215	.0008"	35 mgm	714	.0006"	28 mgm

NOTE: When desiring Alumilite finish over an as-fabricated surface, specify only the Alumilite treatment number along with the coating thickness and weight. For Alumilite finish over a texture, add the texture symbol after the required Alumilite number. For example, if an Alumilite finish over a fine belt polished satin texture is desired on an extruded window stool subject to medium abrasion, **specify:** Window stool finish shall be Alumilite 204C1 treatment with a minimum coating thickness of .0004" and a minimum coating weight of 17 milligrams per square inch.

construction protection

TEMPORARY LACQUER COATING—Is recommended for all texture finishes and Alumilite finishes on such items as windows and wall panels. Provides temporary protection during construction against mortar stains, minor abrasion, etc. Is clear and wears off unnoticed over a period of several years.

*These finishes should be protected against handling marks by two heavy coats of methacrylate lacquer. See **TEMPORARY LACQUER COATING** above.

MILL or AS-FABRICATED FINISH—The surface which naturally results from extrusion, sheet rolling or casting processes.**SANDBLAST FINISH***—Pleasingly rough texture created with compressed air and sand and used mostly for castings.

Fine blast, 100 to 200 mesh.....	G2
Medium blast, 40 to 50 mesh.....	G3
Coarse blast, 16 to 20 mesh.....	G4

SAND BURNISH FINISH*—Fine, uniform, matte finish suitable for flat sheet and castings. Produced by loose sand, gravel, steel balls and an agitating process.....N**CAUSTIC SODA ETCH OR FROSTED FINISH***—Attractive chemical finish similar to etched glass. Should be protected against handling marks with an Alumilite coating or with two heavy coats of clear methacrylate lacquer immediately after etching.....R1**ALCOA ARCHITECTURAL COLOR FINISH**—Hard color surface produced by an improved electrochemical process. The finish is integral with the aluminum, has a high degree of color retention and permanency, and has maximum durability and weather resistance for exterior unmaintained surfaces. Is available from specially selected processors. Lacquer protection will be included.

Alcoa Architectural Gray 2010, Blue 3110, Gold 4010 and Yellow 6010 must be specified on Alcoa Anoclad Sheet Type 10 or on Anoclad Extrusions Type 10.

Alcoa Architectural Gray 2020, Blue 3120, Brown 4020 and Yellow 6020 must be specified on Alcoa Anoclad Sheet Type 20 or on Anoclad Extrusions Type 20.

Alcoa Architectural Gray 2030 must be specified on Alcoa Anoclad Sheet Type 30 or on Anoclad Extrusions Type 30.

To assure proper application of Alcoa Architectural Colors, specify:

MATERIALS: (Item desired) shall be Alcoa Anoclad (Sheet or Extrusions).**FINISH:** (Item desired) shall be finished in Alcoa Architectural Blue 3110 (or color desired) in accordance with standards established by Aluminum Company of America.**ALCOA®ALROK FINISH**—Chemically produced oxide of greenish-gray color that weathers well. Is used primarily on roofing and flashing.

®Registered Trademarks of Aluminum Company of America.

ARCHITECTURAL ALODINE FINISH—Chemically produced coating of light green color, well suited for roofing and siding. (Available from American Chemical Paint Co., Ambler, Pa.)**PORCELAIN ENAMEL FINISH**—Opaque porcelain fused to aluminum by high temperature firing. Is available from various processors in many glossy and matte colors. Is extremely durable. For best results specify Alcoa No. 1 Porcelain Enameling Sheet and Alcoa No. 1 or No. 2 Porcelain Enameling Extrusions.**PAINT, COLORED LACQUERS, ENAMELS**—Can be applied to any properly prepared surface. Removal of grease and treatment with phosphoric acid solutions is sufficient to assure good bond.

Specify: Two sprayed coats of water-white methacrylate lacquer, having a total minimum thickness of .0006" and capable of withstanding the action of lime mortar for at least one week in an atmosphere of 100% relative humidity at room temperature, shall be applied in the manufacturer's plant to the exposed surfaces of all wall facing components subject to staining from alkaline mortar and plaster, abrasion and other construction abuses. Before application of lacquer, the manufacturer shall remove fabrication compounds, moisture and dirt accumulations.

suggested specifications

To facilitate bidding and accurate quoting, it is recommended that the aluminum components, including anchorage and accessories, be treated under a separate specification division and not combined with miscellaneous metalwork or any other division of work. Parentheses within individual items signify multiple choices for selection by specifier. **Bold italicized words and phrases are included for specifier's information only and should be deleted.**

suggested long form specifications

See aluminum architectural product section for Short Form Specification

1. GENERAL CONDITIONS:

- (a) "The General Conditions of the Contract for the Construction of Buildings," Standard Form of American Institute of Architects, latest edition, Articles 1 to 44 inclusive, are part of this contract.
- (b) These Specifications are "streamlined" and include incomplete sentences. Omitted words or phrases such as, "The Contractor shall," "as noted on the Drawings," "according to the plans," "a", "an", "the", and "all" shall be supplied by inference in the same manner as they are when a "note" occurs on Drawings. The words, "shall be," are inferred where dash (—) is used.

2. WORK INCLUDED:

See particular product section for "Suggested Specification Insert."

3. MATERIALS:

See particular product section for "Suggested Specification Insert."

4. FINISHES:

- (a) *See particular product section for "Suggested Specification Insert."*
- (b) All Alcoa alloy 2024-T4 fasteners—Alumilite treatment 204M.

5. WORKMANSHIP, INSTALLATION:

See particular product section for "Suggested Specification Insert."

6. DISSIMILAR MATERIALS:

- (a) Aluminum to Dissimilar Metals.
Where aluminum surfaces contact metals other than stainless steel, zinc, white bronze of small area, or other metals compatible with aluminum, keep aluminum surfaces from direct contact with such parts by (1) painting dissimilar metal with zinc-chromate primer or other suitable primer, followed by one or two coats of aluminum metal-and-masonry paint or other suitable protective coating, excluding those containing lead pigmentation, (2) painting dissimilar metal with heavy-bodied bituminous paint, (3) good quality calking placed between aluminum and dissimilar metal, or (4) nonabsorptive tape or gasket. Steel anchors and connecting members may be hot-dip galvanized or zinc plated after fabrication.

- (b) Drainage from Dissimilar Metals.

Paint dissimilar metals if used in locations where drainage from them passes over aluminum.

- (c) Aluminum to Masonry.

Paint aluminum surfaces in contact with lime mortar, concrete, plaster or other masonry materials with alkaline-resistant coatings, such as heavy-bodied bituminous paint or water-white methacrylate lacquer.

- (d) 1. Aluminum to Wood.

Aluminum in contact with wood or other absorptive materials which may become repeatedly wet shall be painted with two coats of aluminum metal-and-masonry paint or coat of heavy-bodied bituminous paint. Alternate: paint wood or other absorptive material with two coats of aluminum house paint and seal joints with a good quality calking compound.

- 2. Aluminum to Treated Wood.

Where aluminum is in contact with treated wood, wood shall be treated with (pentachlorophenol, 5% minimum concentration) (Wolman salts) (creosote) (zinc naphthenate). Follow the protective measures outlined in paragraph (d) 1.

7. EXPANSION, CONTRACTION:

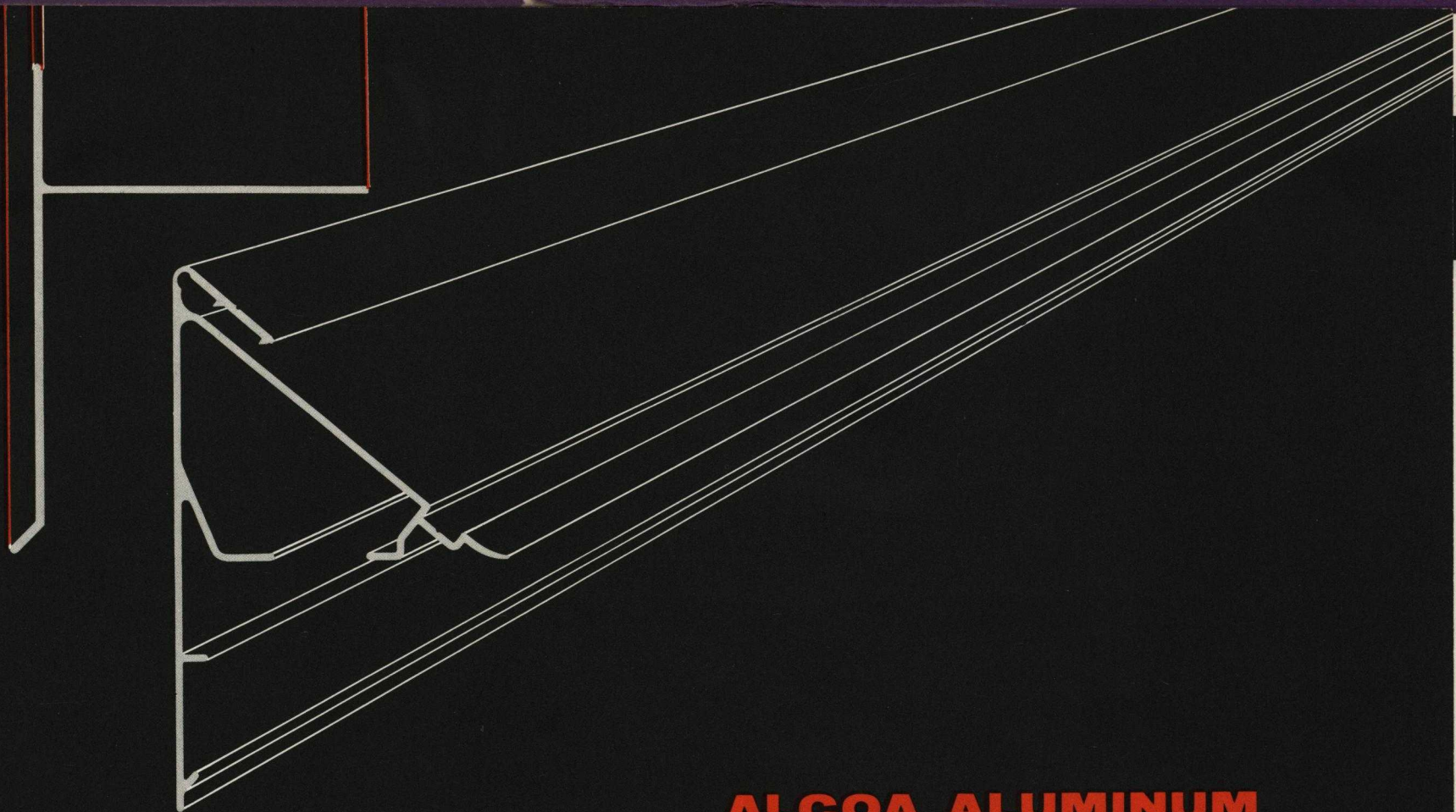
- (a) Aluminum work shall be designed and anchored so that work will not be distorted nor fasteners over-stressed from expansion and contraction of metal.

8. TEMPORARY PROTECTION:

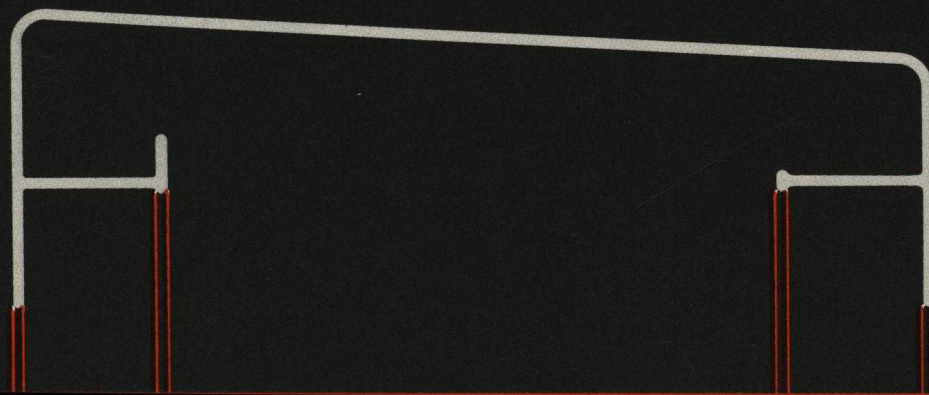
- (a) Aluminum surfaces requiring protection against lime mortar stains, discoloration, surface abrasion and other construction abuses shall be suitably protected in accordance with *Alcoa Architectural Aluminum—Care During Construction*, latest edition.

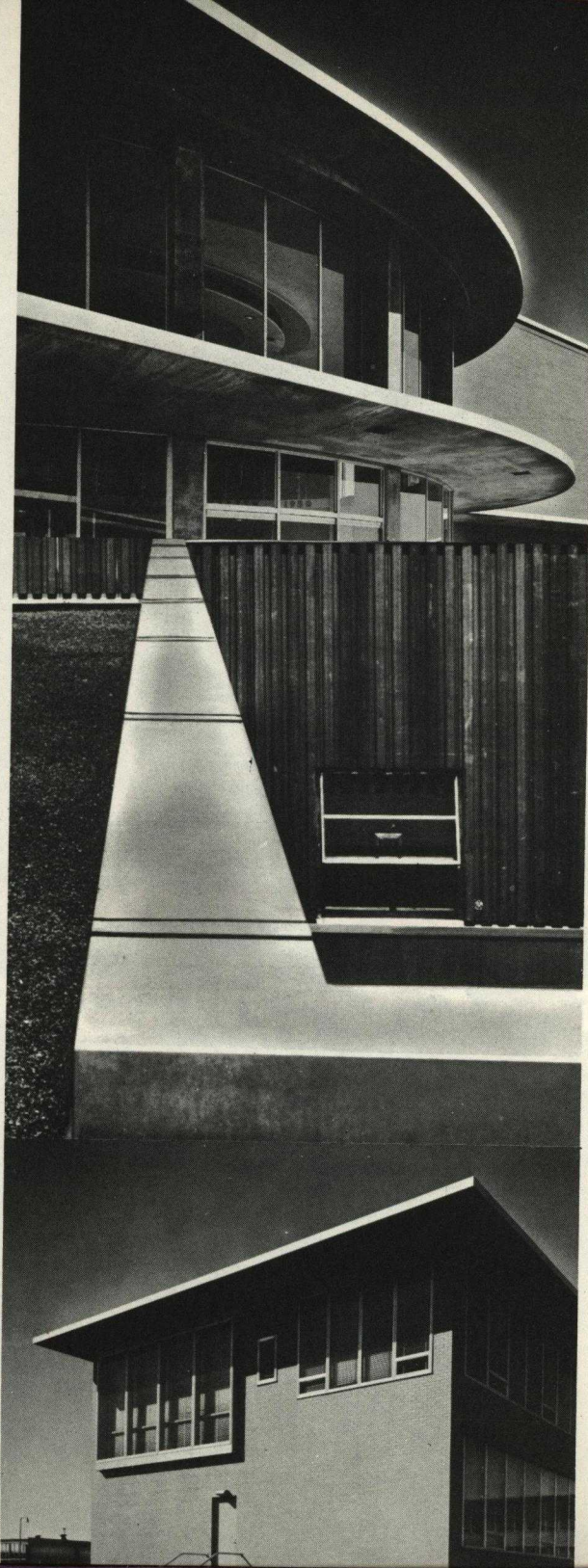
9. FINAL CLEANING:

- (a) Upon completion, (General Contractor) (Aluminum Contractor) (Cleaning Contractor) shall clean aluminum work in accordance with *Alcoa Architectural Aluminum—Care During Construction*, latest edition. Leave aluminum work in satisfactory condition.



ALCOA ALUMINUM
gravel stops—copings

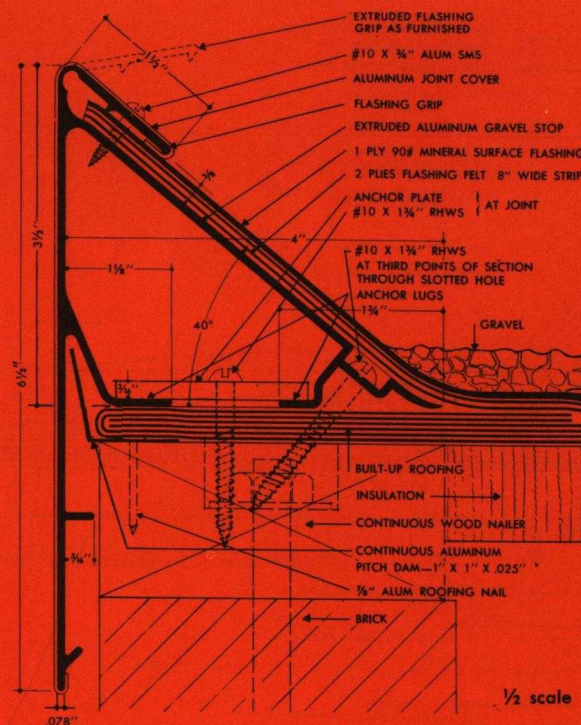




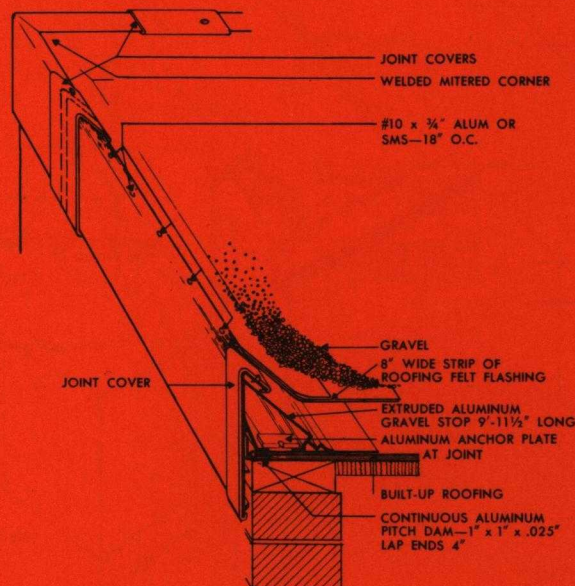
alcoa Extruded Aluminum Gravel Stop and Coping systems provide dependable solutions for one of the most vulnerable spots in building construction, the point of joint between roof and wall. Included on the following pages are four types of extruded aluminum gravel stops and two extruded copings. Each is designed to provide excellent weather protection and rapid assembly.

Since watertightness of a gravel stop or coping depends upon the design and proper functioning of all its parts, Alcoa has engineered systems of accessories around the basic extruded sections. These systems save the architect detailing time and produce an accurate installation. Mitered corners and supplementary parts (the latter fabricated or formed from Alcoa Aluminum sheet) are made with special jigs and dies to assure precise fit on the job.





1/2 scale



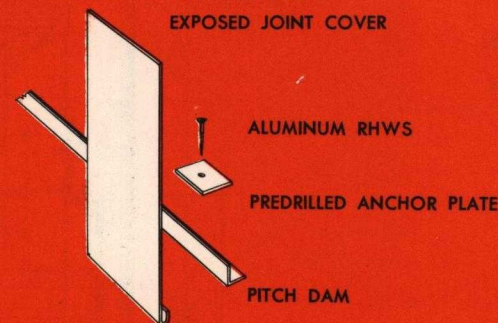
gravel stop type E (68755)

With integral cant strip and fascia
ALLOY 6063-T42
LENGTH—9' 11 1/2"
EST WT PER FT—1.606 LBS

Gravel Stop Accessories

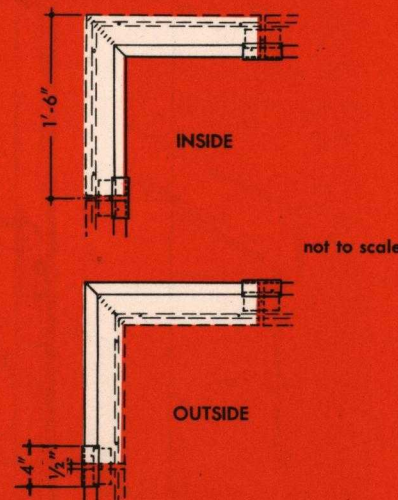
- Mitered corners
- Joint covers
- Pitch dam angles
- Predrilled anchor plates
- Fasteners

accessories



WELDED MITERED CORNERS

NOTE: Mitered corners are furnished with unground weld areas.



gravel stops

This carefully engineered extruded aluminum section incorporates gravel stop, cant strip and fascia band into one piece. Accessories for proper installation of the basic unit form a flat roof terminal system that will meet the most exacting specification.

INSTALLATION PROCEDURE

Before installing gravel stop assembly, wood nailers should be installed level, plumb and straight. Preparatory to mopping on built-up roof, it is necessary to secure in place continuous aluminum pitch dam angle with aluminum nails 18 inches on center. Lap ends 4 inches.

1. Screw mitered corner in place through slot located at bottom of integral cant strip.
2. Loosely screw anchor plate in place.
3. Place gravel stop section anchor lugs under anchor plate; allow 1/2" for expansion joint.
4. Secure gravel stop section at third points through slot located at bottom of integral cant strip.
5. Screw anchor plate tight.
6. Repeat procedure until all gravel stop sections are secured in place.
7. Apply felt strip flashing as per roofing manufacturer's specifications.
8. Place formed lip of joint cover at joint over outside drip edge of gravel stop section; bend joint cover over flashing grip in up position.
9. Bend flashing grips down to secure flashing and tighten joint covers.
10. Screw joint covers in place; screw flashing grips 18 inches on centers in down position.

Note: Store all components in clean, dry storage area. Prevent contact with corrosive or staining materials.

gravel stops

gravel stop type EE

With concealed joint cover, integral cant strip and provision for fascia extensions.

gravel stop 79588 EST. WT PER FT—1.387 lbs
flashing cap 79587 EST. WT PER FT— .468 lbs

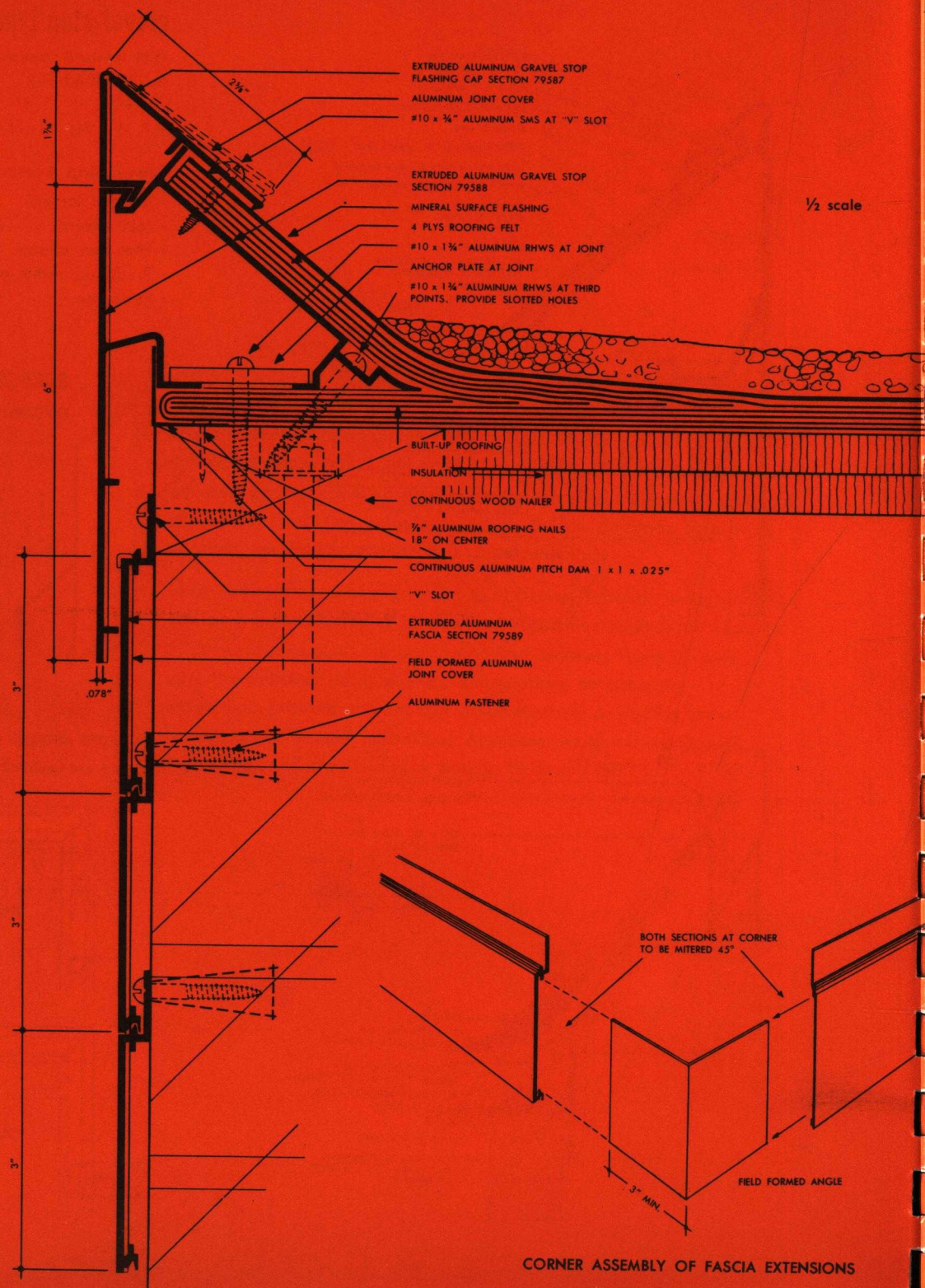
ALLOY 6063-T42
LENGTH—9' 11½"

Gravel Stop Accessories

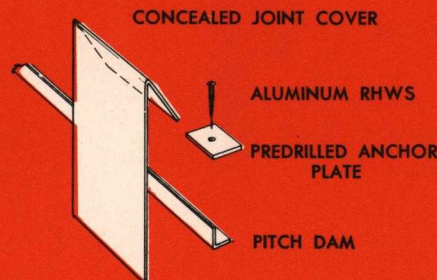
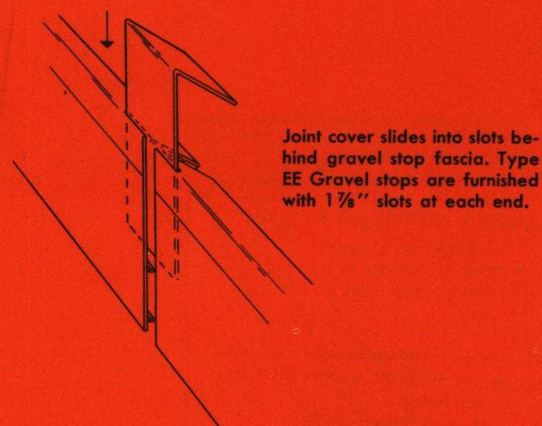
- Mitered corners
- Concealed joint covers
- Pitch dam angles
- Predrilled anchor plates
- 3" fascia extension
- Soffit trim
- Fasteners

This gravel stop system has concealed joint covers, integral cant strip and provision for fascia extensions. The joint cover is hidden from view by being inserted in slots behind the gravel stop fascia to assure a smooth fascia line. The cant strip is an integral part of the gravel stop, making it leakproof and furnishing ample strength to prevent breakthrough of the flashing. Fascia extensions may be used to achieve a deep fascia band if desired, and a soffit trim is available for over-hang roofs or marquees. The use of a pitch dam prevents roofing compounds from marking the walls. This two-piece system forms a self-aligning unit. Application of the flashing cap over the cant strip flashing assures rapid, convenient installation.

Type EE Gravel Stop may be used with or without fascia extensions or soffit trim.

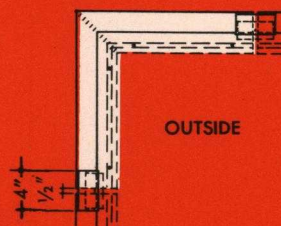
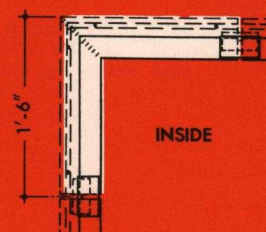


accessories

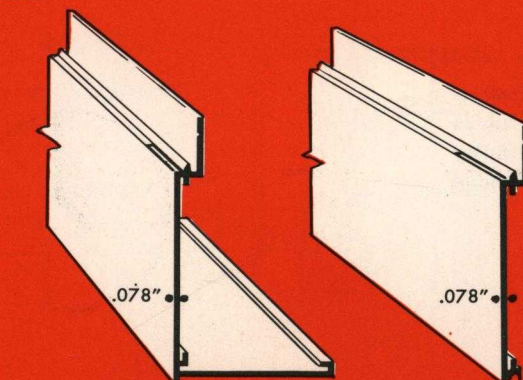
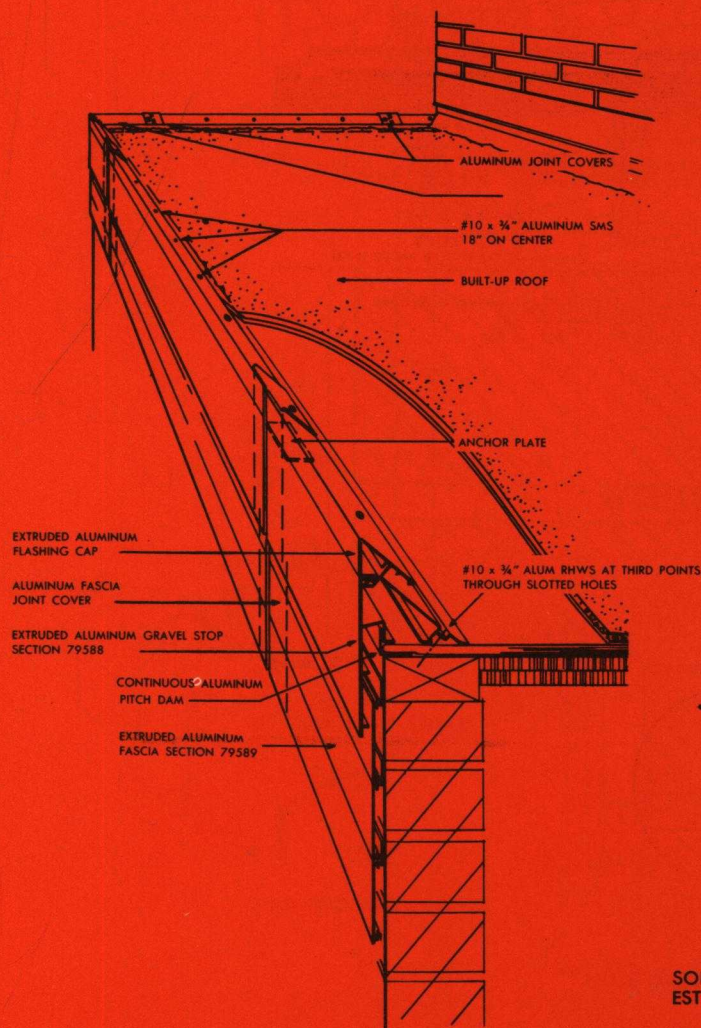


WELDED MITERED CORNERS

NOTE: Gravel stop and flashing cap mitered corners are shipped as assembled unit with unground weld areas.



not to scale



SOFFIT TRIM SECTION 79590 EST WT PER FT—.680 LBS.
FASCIA SECTION 79589 EST WT PER FT—.454 LBS.
ALLOY 6063-T42; LENGTH—9'11 1/2"

(ends preslotted 1 1/8" for concealed joint cover)

INSTALLATION PROCEDURE

Before installing gravel stop assembly, install wood nailers (and all other materials covered by the assembly) level, plumb and straight. Preparatory to mopping on built-up roof, set continuous pitch dam in plastic roofing cement, and secure it with aluminum nails 18" on center. Lap ends 4".

Installation procedures for entire assembly including soffit and fascia sections are described below. For installation of gravel stop without fascia or soffit sections start with step No. 5. Install soffit and/or fascia sections prior to placement of gravel stop section starting with bottom section and securing each succeeding section over the one below. Provide 1/2" minimum overlap between outermost face of soffit or top fascia and gravel stop sections.

1. Cut all corner pieces of soffit or fascia sections so that their end joints will be in line with those of the welded, mitered gravel stop corner sections. Miter one end, and slot other end to receive concealed joint cover described in step No. 4. Align corner pieces by inserting preformed sheet corner angles as shown in detail. If desired, angle insert can be secured in place by means of an adhesive or by deforming the securing lips or the angle itself. Care should be exercised not to damage exposed faces.
2. Secure soffit or fascia corner assemblies to building with two fasteners on either side of corner. Place fasteners through holes drilled in upper leg at "V" slot.
3. Allowing 1/2" expansion joints between all sections, secure adjoining soffit and/or fascia sections (9'11 1/2" long) at third points through slotted holes cut in upper leg at "V" slot.
4. Insert inside cover plates through slots cut at ends of sections as indicated in detail. If the lengths other than standard are used, slots must be cut by installer.
5. Screw mitered gravel stop corner in place through holes drilled through "V" slot located at bottom of integral cant strip.
6. Loosely screw anchor plate in place.
7. Place gravel stop section anchor lugs under anchor plate; allow 1/2" for expansion joint.
8. Secure gravel stop section at third points through slotted holes cut in bottom of integral cant strip at "V" slot.
9. Screw anchor plate tight.
10. Repeat procedure until all gravel stop sections are secured in place.
11. Apply felt strip flashing as per roofing manufacturer's specifications.
12. Position flashing cap and bend down to secure flashing felts. Fasten as indicated in details.
13. Same as No. 4.
14. Fasten joint cover with No. 10 aluminum sheet metal screw to only one gravel stop section.

Note: Store all components in clean, dry storage area. Prevent contact with corrosive or staining materials.

gravel stops

gravel stop type F

With extruded joint cover

ALLOY 6063-T42
LENGTH—9' 11 1/2"

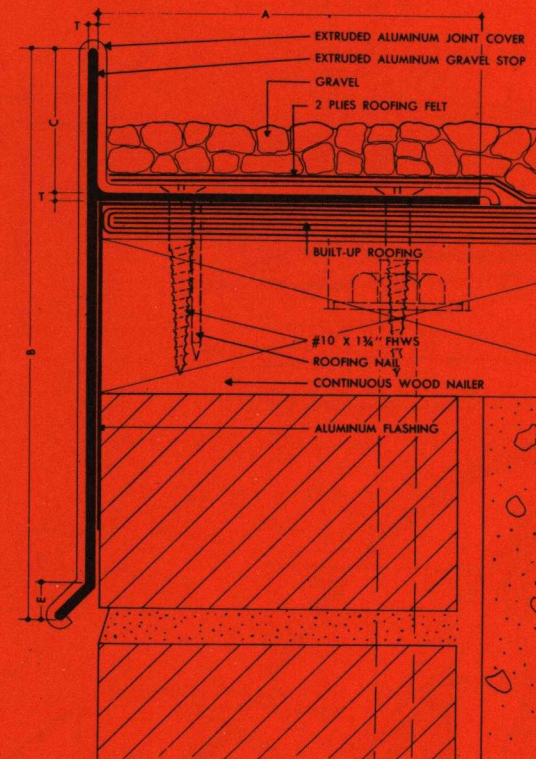
GRAVEL STOP SECTION NO.	DIMENSIONS— INCHES					EST. WT PER FT, LBS	JOINT COVER SECTION NO.	EST WT PER FT, LBS
	A	B	C	E	T			
42059*	4	3 1/2	5/8	9/32	9/32	.848	42062	1.000
87097*	4	3 1/2	1	9/32	3/32	.848	87098	1.042
42058*	4	5	1	7/16	3/32	1.027	42061	1.229
66588	4	6	1 1/2	17/32	3/32	1.145	66589	1.375
39259	4	6 1/2	3/4	3/8	3/32	1.201	39258	1.340
87096	4	6 1/2	1	3/8	3/32	1.201	87095	1.375
42063*	4	7 3/4	5/8	1/4	1/8	1.768	42060	1.994
84968*	4	7 3/4	1 1/2	1/4	1/8	1.768	84969	2.125

Gravel Stop Accessories

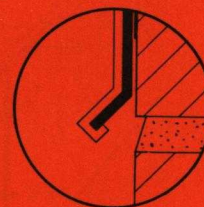
- Mitered corners
- Extruded joint covers
- Joint flashings
- Fasteners

The Type F Gravel Stop has for years been a favorite with architects and contractors because of its low cost and simplicity of installation. It is suitable for use on bonded roofs and has accessories available for each of its 8 sizes. Tight fitting extruded joint covers together with joint flashing assure watertight joints. Welded mitered inside and outside corners complete the system.

*Have drip ends as shown in circle inset drawing



1/2 scale

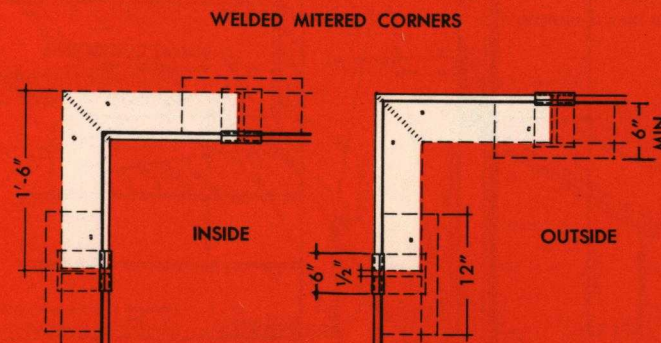
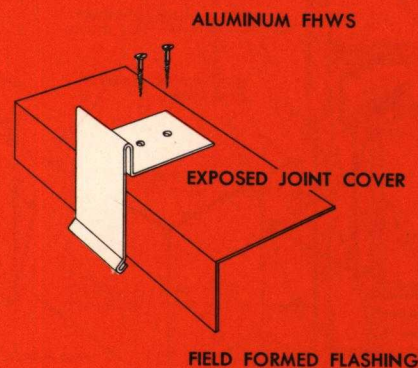


gravel stops



not to scale

accessories



NOTE: Mitered corners are furnished with unground weld areas.

INSTALLATION PROCEDURE

Before installing gravel stop assembly, wood nailers should be installed level, plumb and straight.

1. Center sheet aluminum flashing at expansion joint, 1' 6" from face of corner; nail in place.
2. Screw mitered corner in place.
3. Slide joint cover to temporary position.
4. Place section of extruded gravel stop next to mitered corner; allow 1/2" for expansion joint.
5. Screw gravel stop section at mid-point at two places.
6. Place bed of plastic roofing cement on inside vertical and horizontal surfaces under cover plate.
7. Slide joint cover over expansion joint and screw in place.
8. Repeat procedure for successive gravel stop section installations. Sheet flash all expansion joints.
9. Apply felt strip flashing as per roofing manufacturer's specifications.

Note: Store all components in clean, dry storage area. Prevent contact with corrosive or staining materials.

gravel stops

gravel stop type FF

With concealed joint cover

ALLOY 6063-T42

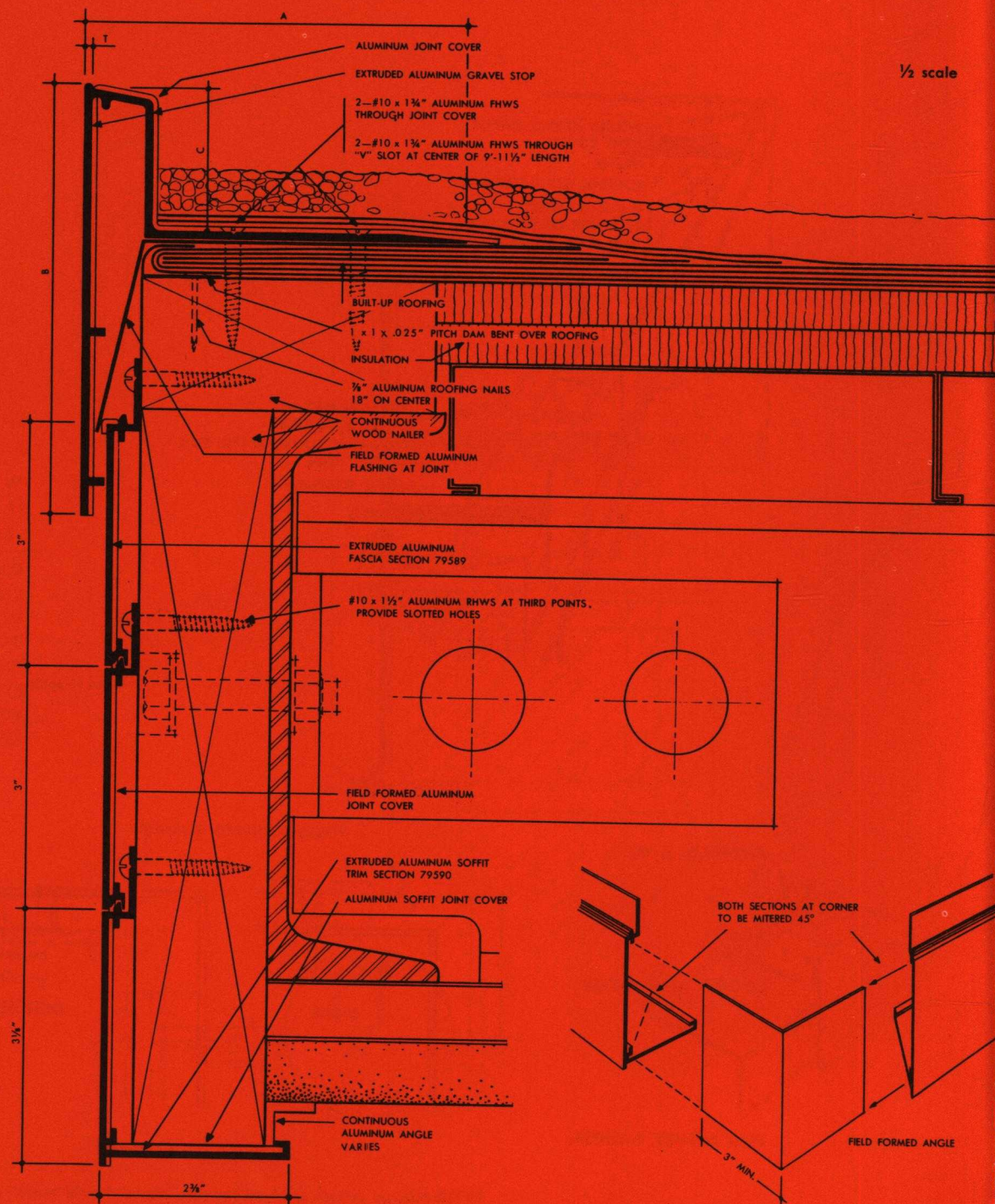
LENGTH—9'11½"

GRAVEL STOP SECTION NO.	DIMENSIONS—INCHES				EST WT PER FT, LBS
	A	B	C	T	
79591	4¾"	4⅝"	¾"	⅜"	1.126
79592	4¾"	5⅝"	1¾"	⅜"	1.350

Gravel Stop Accessories

- Mitered corners
- Concealed joint covers
- Pitch dam angles
- Joint flashings
- 3" fascia extension
- Soffit trim
- Fasteners

To achieve smooth, uninterrupted eave lines, the Type FF Gravel Stop has been designed with a concealed joint cover which slides into slots behind the fascia. Also featured is a pitch dam that keeps roofing compounds from marking the walls and joint flashings to give protection at the joints. Fascia extensions and soffit trim may be used with it if desired. This gravel stop is equally well suited to installation on flat or on low-pitched roofs and canopies.

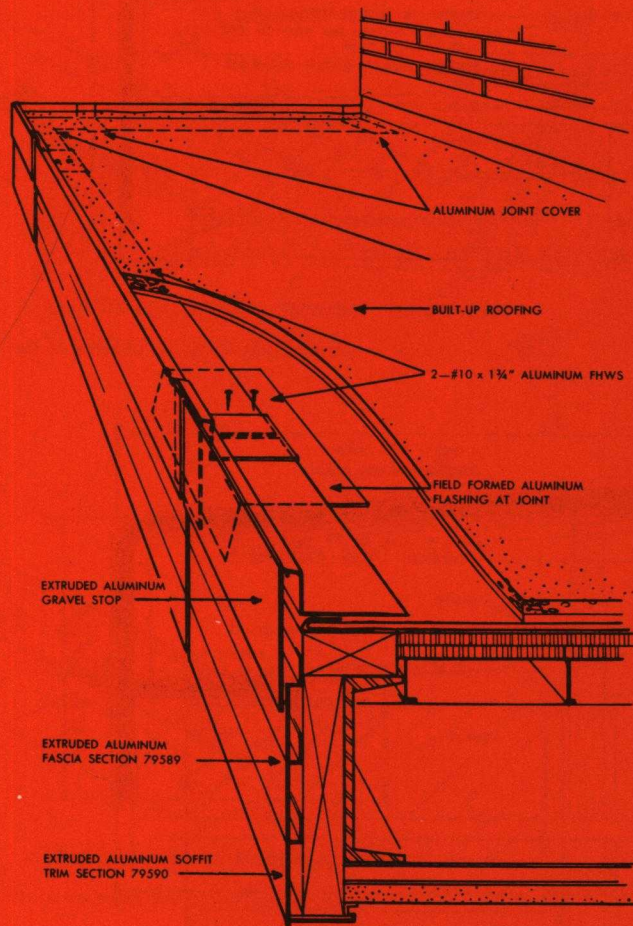
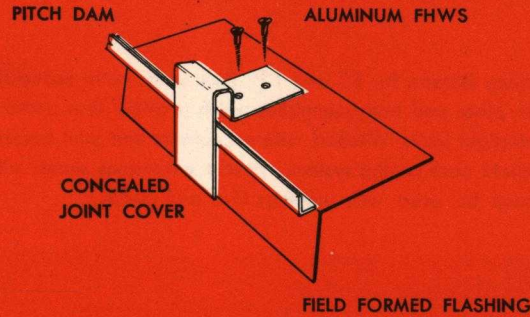


½ scale

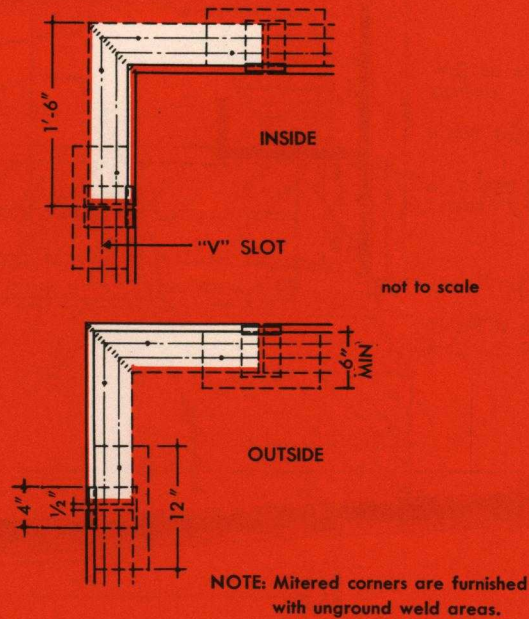
CORNER ASSEMBLY OF SOFFIT SECTIONS

accessories

Joint cover slides into slots behind gravel stop fascia. Type FF Gravel Stops are furnished with 2 7/8" slots at each end.



WELDED MITERED CORNERS



SOFFIT TRIM SECTION 79590 FASCIA SECTION 79589
EST WT PER FT—.680 LBS. EST WT PER FT—.454 LBS.
ALLOY 6063-T42; LENGTH—9'11 1/2"

(ends preslotted 1 7/8" for concealed joint cover)

INSTALLATION PROCEDURE

Before installing gravel stop assembly, install wood nailers (and all other materials covered by the assembly) level, plumb and straight. Preparatory to mopping on built-up roof, set continuous pitch dam in plastic roofing cement, and secure it with aluminum nails 18" on center. Lap ends 4".

Installation procedures for entire assembly including soffit and fascia sections are described below. For installation of gravel stop without fascia or soffit sections start with step No. 5. Install soffit and/or fascia sections prior to placement of gravel stop section starting with bottom section and securing each succeeding section over the one below. Provide 1/2" minimum overlap between outermost face of soffit or top fascia and gravel stop sections.

1. Cut all corner pieces of soffit or fascia sections so that their end joints will be in line with those of the welded, mitered gravel stop corner sections. Miter one end, and slot other end to receive concealed joint cover described in step No. 4. Align corner pieces by inserting preformed sheet corner angles as shown. If desired, angle insert can be secured in place by means of an adhesive or by deforming the securing lips or the angle itself. Care should be exercised not to damage exposed faces.
2. Secure soffit or fascia corner assemblies to building with two fasteners on either side of corner. Place fasteners through holes drilled in upper leg at "V" slot.
3. Allowing 1/2" expansion joints between all sections, secure adjoining soffit and/or fascia sections (9'11 1/2" long) at third points through slotted holes cut in upper leg at "V" slot.
4. Insert concealed joint covers through slots cut at ends of sections as indicated in detail. If lengths other than standard are used, slots must be cut by installer.
5. After built-up roof is installed, bend over pitch dam as per details.
6. Center sheet aluminum flashing at expansion joints, 1'6" from each face of corner; nail in place.
7. Screw mitered gravel stop corner in place through holes drilled through "V" slots.
8. Place section of extruded gravel stop next to mitered corner; allow 1/2" for expansion joint.
9. Screw gravel stop section at mid-point at two places through "V" slots.
10. Place bed of plastic roofing cement on inside vertical and horizontal surfaces under cover plate.
11. Same as No. 4.
12. Repeat procedure for successive gravel stop section installations. Sheet flash all expansion joints.
13. Apply felt strip flashing as per roofing manufacturer's specifications.

Note: Store all components in clean, dry storage area. Prevent contact with corrosive or staining materials.

copings

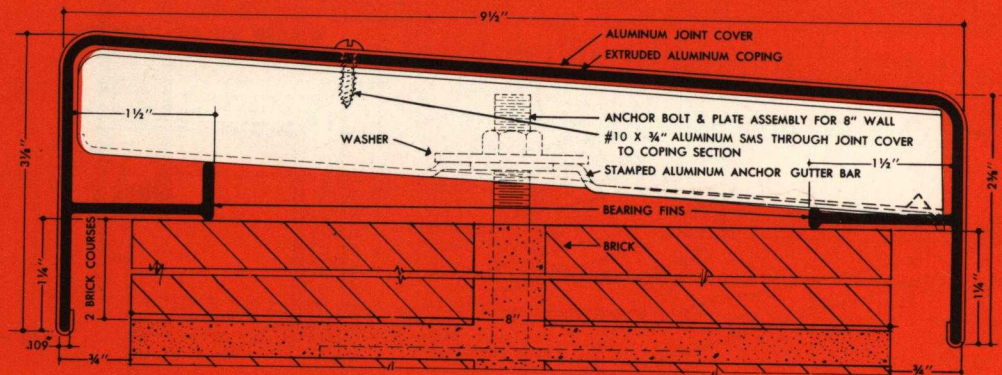
Alcoa's coping systems for 8" and 12" thick walls have especially designed anchor-gutter bars and anchor plate and bolt assemblies which provide firm anchorage for the coping section and assure watertight joints. Welded mitered corners and joint covers of partly preformed aluminum sheet complete each coping system. Fascia extensions shown with Gravel Stops Types EE and FF may also be used with copings G-8 and G-12.

coping type G-8 (66611)

For 8" thick walls
ALLOY 6063-T42
LENGTH—9' 10½"
EST WT PER FT—2.412 LBS

Coping Accessories

- Mitered corners
- Joint covers
- Anchor-gutter bars
- Anchor plate and bolt assemblies
- Fasteners



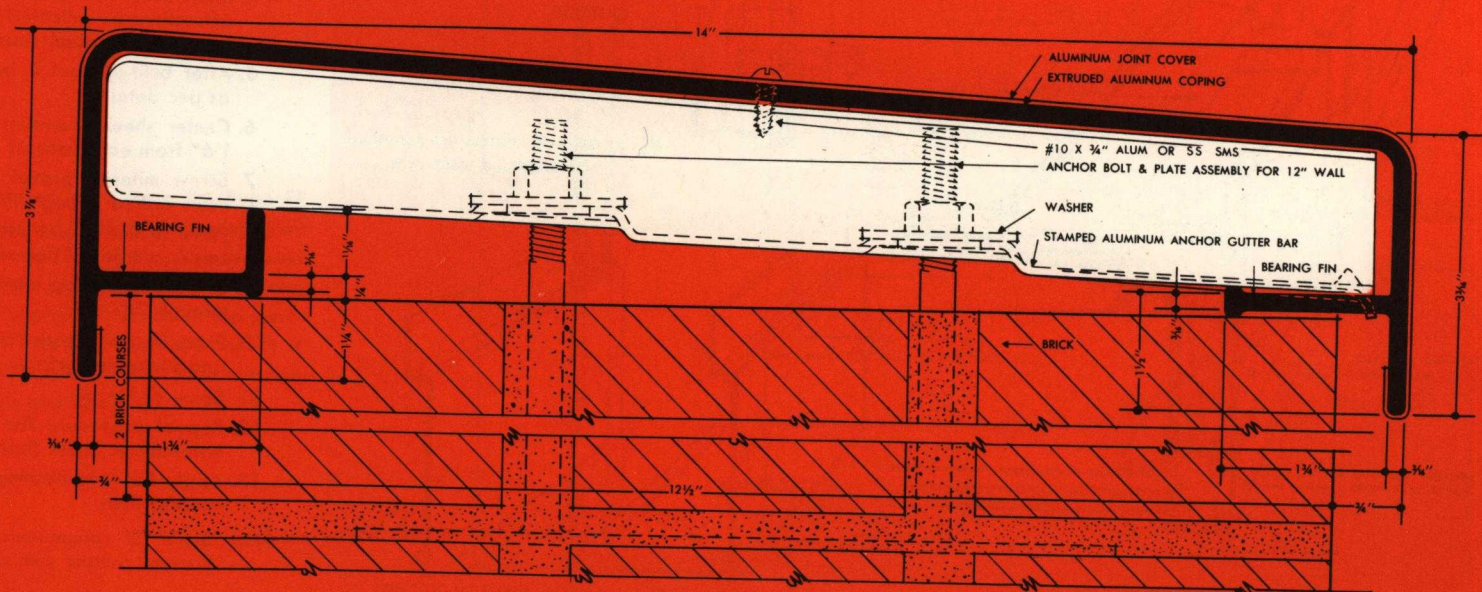
½ scale

coping type G-12 (69177)

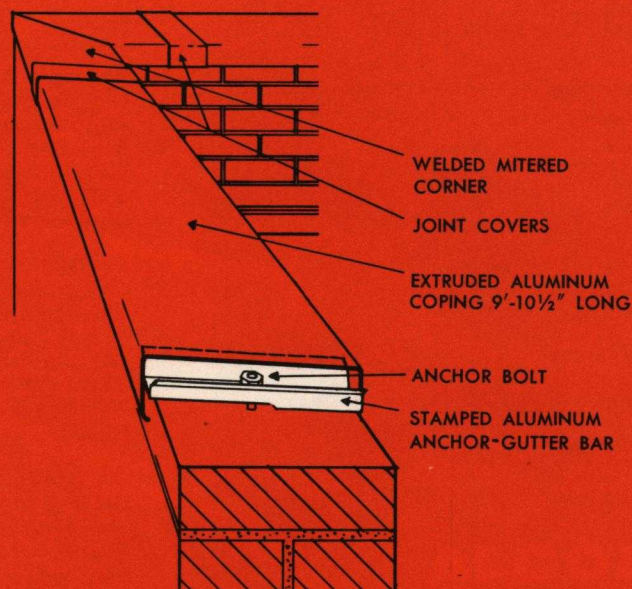
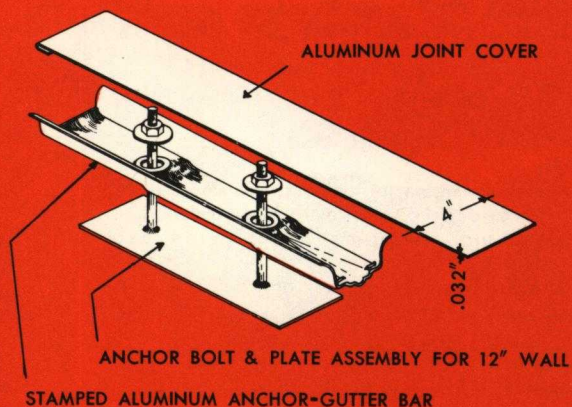
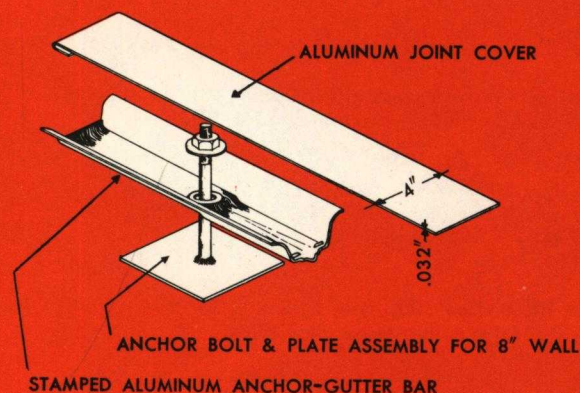
For 12" thick walls
ALLOY 6063-T42
LENGTH—9' 10½"
EST WT PER FT—5.552 LBS

Coping Accessories

- Mitered corners
- Joint covers
- Anchor-gutter bars
- Anchor plate and bolt assemblies
- Fasteners

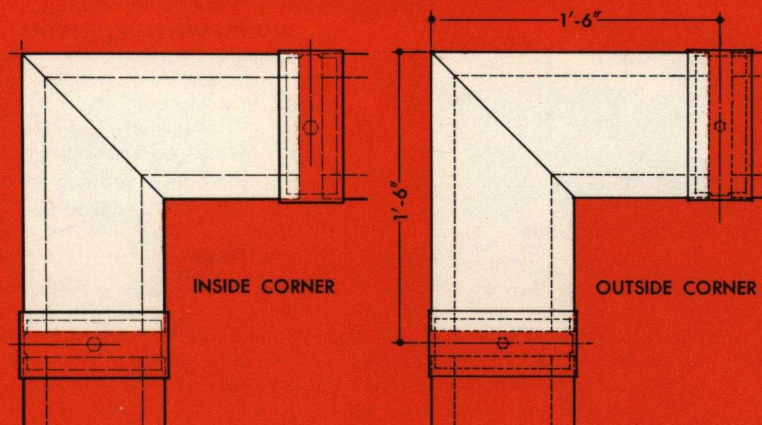


accessories



WELDED MITERED CORNERS

NOTE: Mitered corners are furnished with unground weld areas.



INSTALLATION PROCEDURE FOR COPING TYPES G-8 AND G-12

Preparatory to direct installation of coping assembly, place required anchor plate and bolt assemblies during construction. Starting at designated corner, place first anchor plate and bolt assembly on center of wall $1' 5\frac{1}{4}"$ from face of corner wall. This dimension is for 8" and 12" walls as detailed. It will change slightly when wall thicknesses vary because of other brick and joint conditions. With aid of a template, locate successive anchor plate and bolt assemblies on center of wall at 10-foot intervals. Top course of brick must be level, plumb and straight.

1. Set mitered corner in place.
2. Loosely bolt anchor-gutter bar in place.
3. Place bearing fins of extruded coping under anchor-gutter bar; allow $1\frac{1}{2}"$ for expansion and construction joint.
4. Fasten anchor-gutter bar.
5. Place formed lip of joint cover at joint over outside drip edge of coping section; bend in place. Secure joint cover to one coping section only by crimping or with aluminum sheet metal screw.
6. Repeat procedure for successive coping section installations.

Note: Store all components in clean, dry storage area. Prevent contact with corrosive or staining materials.

not to scale

1. GENERAL CONDITIONS: See "Suggested Long Form Specifications."

2. WORK INCLUDED:

- (a) Furnish labor, materials and equipment to complete all aluminum (gravel stops) (copings) (fascias) (soffit trim) and related work indicated on drawings or specified herein.
- (b) (Alcoa Aluminum Gravel Stop Type (E) (F) Assembly) (Alcoa Aluminum Gravel Stop Type (EE) (FF) Assembly) (with fascia) (and) (with soffit trim) (Alcoa Aluminum Coping Type (G-8) (G-12) Assembly).
- (c) Shop drawings.

3. MATERIALS:

Insert one of the following listed types as required by job condition

ALCOA COPING TYPE (G-8) (G-12)

- (a) Coping—extruded, Alcoa alloy 6063-T42, Section..... 9'10½" long.
Insert section desired.
- (b) Mitered corners—welded, extruded, Alcoa alloy 6063-T42, Section.....
Insert section desired.
- (c) Joint covers—formed sheet, Alcoa alloy 3003-O, .032" thick, 4" wide.
- (d) Anchor-gutter bars—stamped sheet, Alcoa alloy 5052-H34, .081" thick.
- (e) Anchor bolt and plate assemblies—steel, electro-zinc plated, .0005" minimum thickness after fabrication.
- (f) Fasteners: screws—Alcoa alloy 2024-T4.

ALCOA GRAVEL STOP TYPE EE

- (a) Gravel stop—extruded, Alcoa alloy 6063-T42, Section 79588, 9'11½" long.
- (b) Flashing cap—extruded, Alcoa alloy 6063-T42, Section 79587, 9'11½" long.
- (c) Mitered corners—welded, extruded, Alcoa alloy 6063-T42, Sections 79588 and 79587.
- (d) Concealed joint covers—formed sheet, Alcoa alloy 3003-H14, 4" wide, .032" thick.
- (e) Pitch dam angles—formed sheet, Alcoa alloy 3003-H14, 1" x 1" x .025" thick x 8' long.
- (f) Predrilled anchor plates—sheet, Alcoa alloy 3003-H18, 1¾" x 4" x ⅜" thick.
- (g) 3" fascia extension—extruded, Alcoa alloy 6063-T42, Section 79589, 9'11½" long.*
- (h) Soffit trim—extruded, Alcoa alloy 6063-T42, Section 79590, 9'11½" long.*
- (i) Fasteners: screws—Alcoa alloy 2024-T4; nails—Alcoa alloy 6061-T913.

ALCOA GRAVEL STOP TYPE FF

- (a) Gravel stop—extruded, Alcoa alloy 6063-T42, Section..... 9'11½" long. *Insert section selected.*
- (b) Mitered corners—welded, extruded. Alcoa alloy, 6063-T42, Section.....
Insert section selected.

*Optional

**It is suggested that a representative of Aluminum Company of America be consulted when specifying finishes other than standard "Mill Finish."

- (c) Concealed joint covers—formed sheet, Alcoa alloy 3003-H14, 6" wide x .050" thick.
- (d) Flashings—sheet, Alcoa alloy 3003-H14, 12" wide x .025" thick.
- (e) Pitch dam angles—formed sheet, Alcoa alloy 3003-H14, 1" x 1" x .025" thick x 8' long.
- (f) 3" fascia extensions—extruded, Alcoa alloy, 6063-T42, Section 79589, 9'11½" long.*
- (g) Soffit trim—extruded, Alcoa alloy 6063-T42, Section 79590, 9'11½" long.*
- (h) Fasteners: screws—Alcoa alloy 2024-T4; nails—Alcoa alloy 6061-T913.

ALCOA GRAVEL STOP TYPE E

- (a) Gravel stop—extruded, Alcoa alloy 6063-T42, Section 68755, 9' 11½" long.
- (b) Mitered corners—welded, extruded, Alcoa alloy 6063-T42, Section 68755.
- (c) Outside joint covers—formed sheet, Alcoa alloy 3003-O, 4" wide, .032" thick.
- (d) Pitch dam angles—formed sheet, Alcoa alloy 3003-H14, 1" x 1" x .025" thick x 8' long.
- (e) Predrilled anchor plates—sheet, Alcoa alloy 3003-H18, 2" x 4" x ⅜" thick.
- (f) Fasteners: screws—Alcoa alloy 2024-T4; nails—Alcoa alloy 6061-T913.

ALCOA GRAVEL STOP TYPE F

- (a) Gravel stop—extruded, Alcoa alloy 6063-T42, Section....., 9' 11½" long.
Insert section selected.
- (b) Mitered corners—welded, extruded, Alcoa alloy 6063-T42, Section.....
Insert section selected.
- (c) Outside joint covers—extruded, Alcoa alloy 6063-T42, 6" wide, Section.....
Insert section selected.
- (d) Flashings—sheet, Alcoa alloy 3003-H14, .025" thick, 12" wide.
- (e) Fasteners: screws—Alcoa alloy 2024-T4; Alcoa nails—Alcoa alloys 6061-T913.

4. FINISHES:

- (a) Exposed surfaces—(Mill Finish) (Satin Finish) (Bright Finish) (Alumilite Finish) (Alrok No. 2) (Porcelain Enamel Finish). **

5. WORKMANSHIP, INSTALLATION:

- (a) Before starting work, verify governing dimensions at building; examine adjoining work on which this work is in any way dependent for its required installation.
- (b) Welding—Inert gas shielded metal arc welding method as per Alcoa's *Welding Alcoa Aluminum*, latest edition.
- (c) Set (gravel stops) (copings) (fascias) (soffit trim) to proper and true planes in accordance with installation procedures for (Gravel Stop Type (E) (F) (EE) (FF) (Coping Type (G-8) (G-12) as included in *Alcoa Architectural Stocks*.

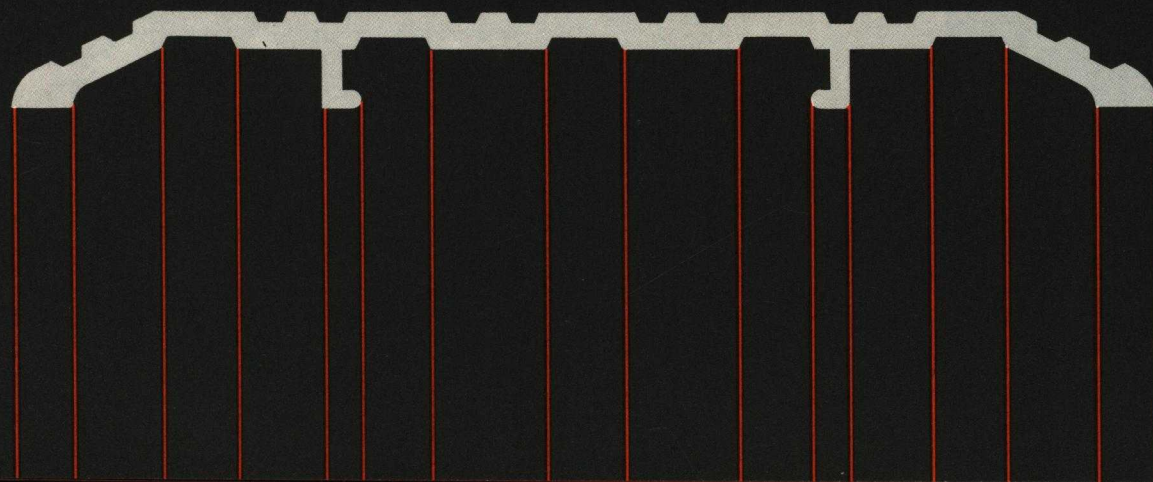
See "Suggested Long Form Specifications" to complete specification.

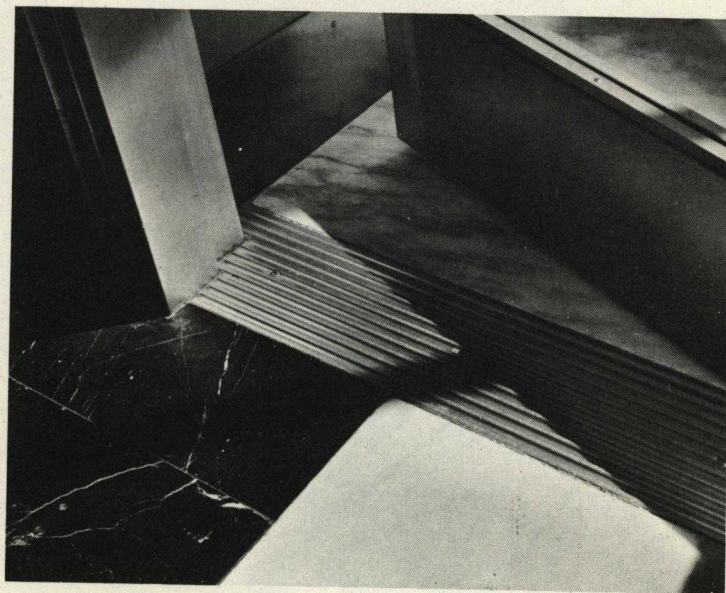
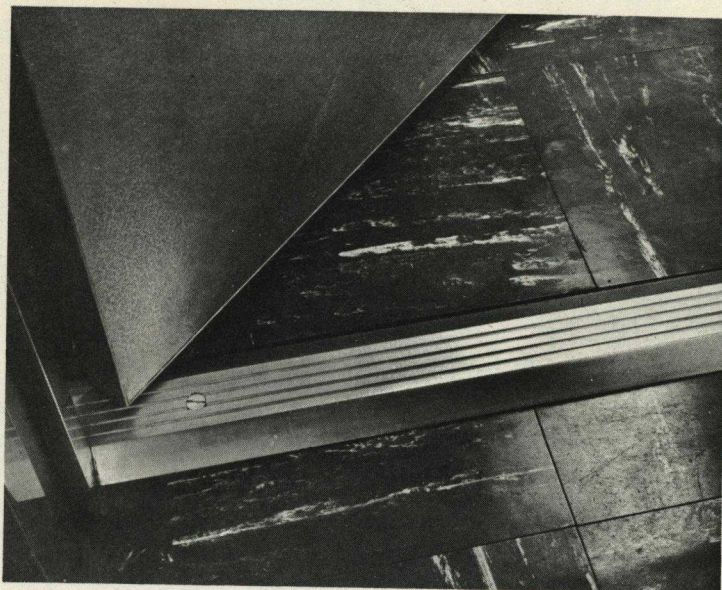
short form specification

Contractor shall furnish and install Alcoa Aluminum (Gravel Stop Type (EE) (E) (F) (FF) Section..... *insert section selected*) (Coping Type (G-8) (G-12) as indicated on drawings. Workmanship and installation shall be in accordance with recommended standards of Aluminum Company of America.



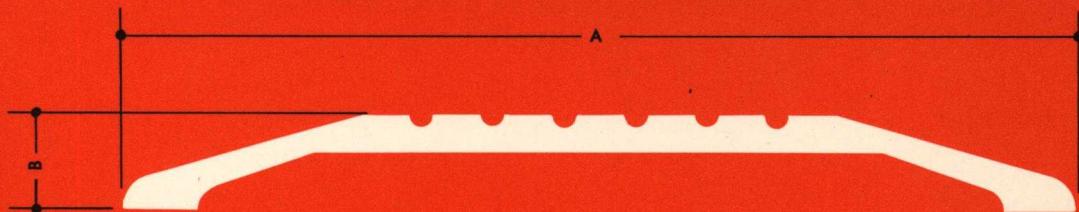
ALCOA ALUMINUM
thresholds





alcoa manufactures a series of thresholds which are designed to meet the many problems which arise in entryways at floor level. Types designed for outside entries have provision for accommodating weather stripping and changes of level occurring with the use of interior floor coverings such as linoleum, resilient tile or carpet. Some threshold types for interior use have provision for differences in floor level on either side of the entry. Thresholds of an identical tread design are available in variable widths which may be used with floor-mounted door pivots and closures. The lengths of sections stocked give the designer great freedom in setting the widths of access ways. Tread patterns minimize slip hazard and absorb the effects of hard usage. The ease with which aluminum may be worked assures good fit if adjustments are required at the job. Schemes for interior decoration may be planned with the assurance that the neutral color of aluminum will always harmonize agreeably.



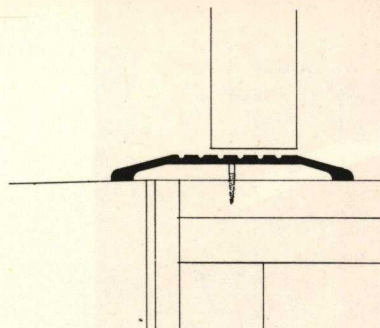


thresholds

threshold type B

ALLOY 6063-T5
LENGTH—16' 3"

SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A	B	
38651	3	1/2	.721
19047	4	1/2	.829
19048	5	1/2	1.102
19049	6	1/2	1.226
26638	7	1/2	1.777



FOR USE ON WOOD



#10 FHWS
aluminum screw
recommended

FOR USE ON MASONRY



#10 FHWS
aluminum screw
with masonry plug
recommended

FOR USE ON METAL

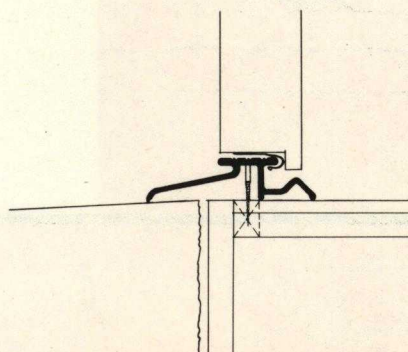


#10 FHMS
aluminum screw
recommended

threshold type E

ALLOY 6063-T5
LENGTH—16' 3"

SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A	B	
20999	3 1/2	7/8	.661
38658	4 1/4	7/8	.760

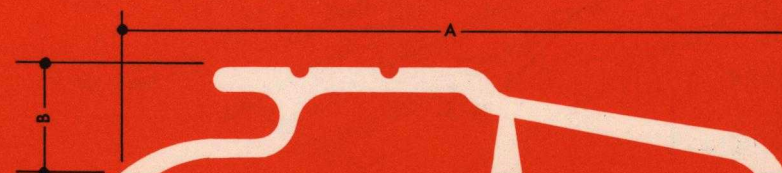
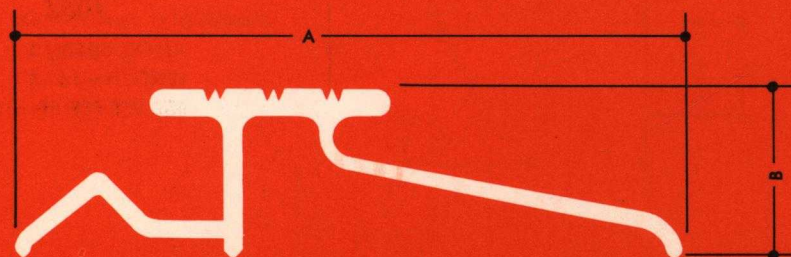


threshold type D

ALLOY 6063-T5
LENGTH—16' 3"

(installation similar to
Threshold Type E)

SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A	B	
10353	3 1/2	5/8	.595
38649	4 1/4	5/8	.689



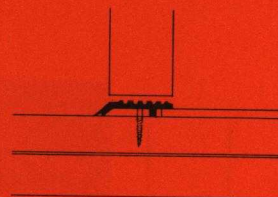
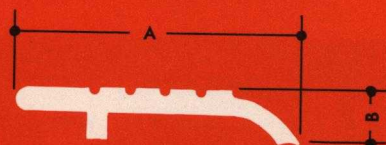
thresholds



threshold type C

ALLOY 6063-T5
LENGTH—16' 3"

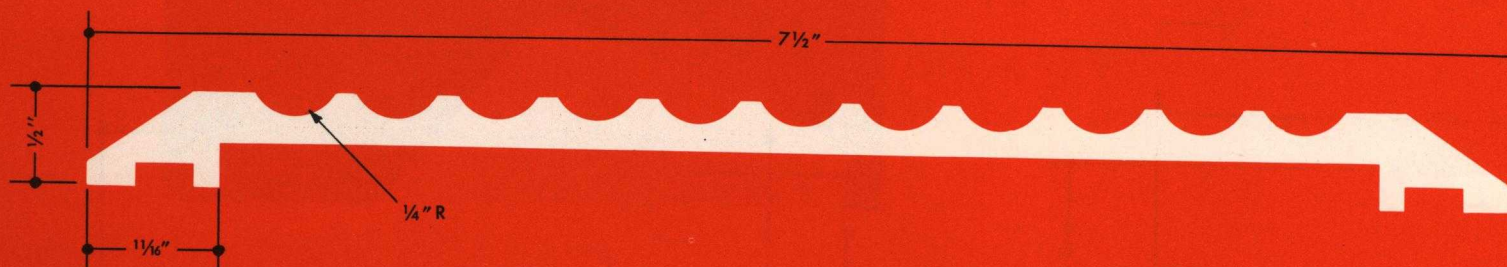
SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A	B	
10351	3	1/4	.476
10352	4 3/4	1/2	.894



threshold type F

ALLOY 6063-T5
LENGTH—16' 3"

SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A	B	
10346	1 1/4	1 3/4	.180
38653	1 3/8	1 3/4	.194
10347	1 1/2	1 3/4	.232
38654	1 5/8	1 3/4	.224



threshold type W 7032

ALLOY 6063-T5
LENGTH—16' 3"
EST WT PER FT—1.798 LBS

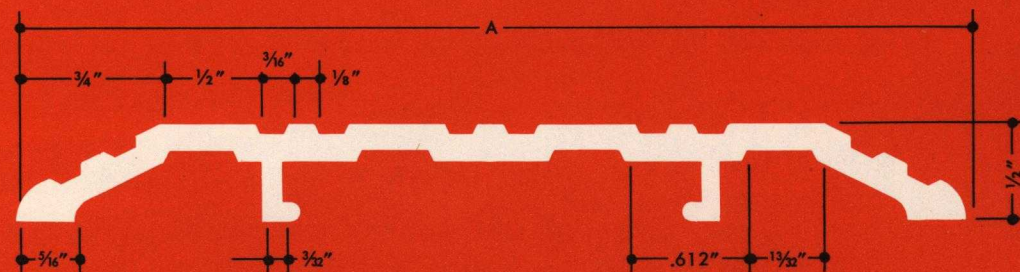
threshold type R

For commercial and industrial use; suitable for floor mounted door checks

ALLOY 6063-T5

LENGTH—16' 3"

SECTION NUMBER	DIMENSION A INCHES	EST WT PER FT, LBS
60585	4	.740
60586	5	1.014
60587	6	1.183
60588	7	1.352



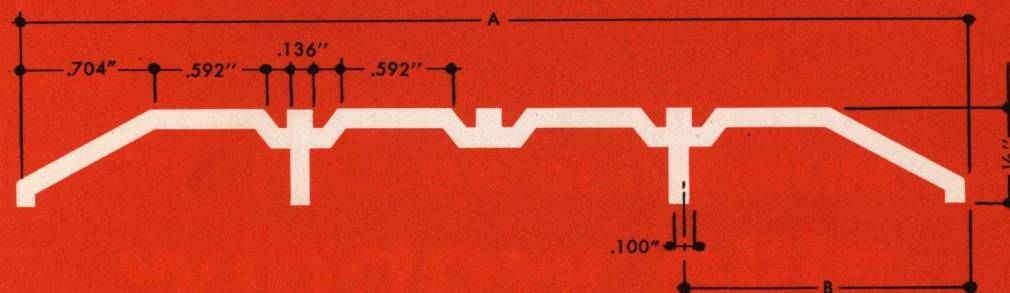
threshold type H

For residential and commercial use; suitable for floor mounted door checks

ALLOY 6063-T5

LENGTH—16' 3"

SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A	B	
84782	4	2.000	.630
84783	5	1.450	.804
84784	6	2.000	.988
84785	7	2.293	1.127



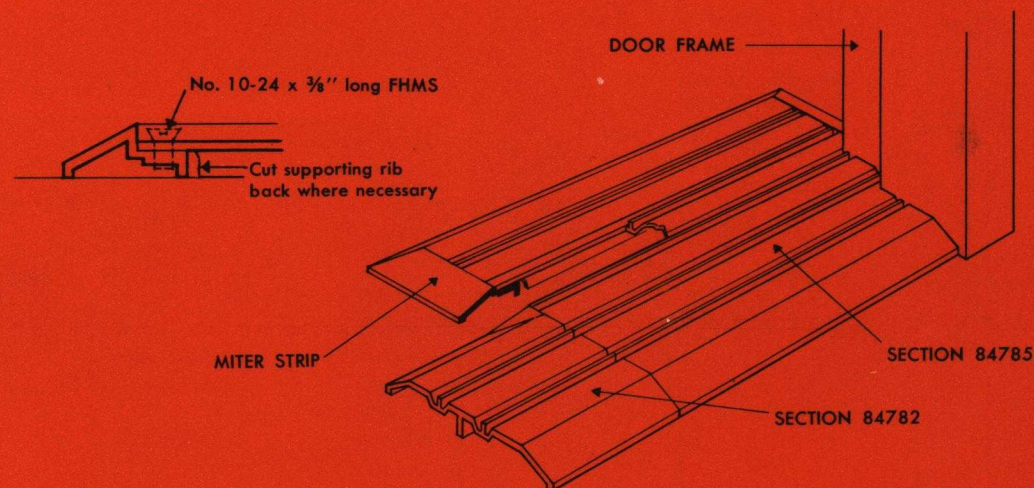
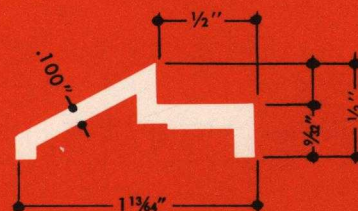
threshold miter strip 84781

For use with Type H thresholds

ALLOY 6063-T5

LENGTH—16'

EST WT PER FT— .211 LBS



1. GENERAL CONDITIONS: See "Suggested Long Form Specifications."

2. WORK INCLUDED:

- (a) Furnish labor, materials and equipment to complete all aluminum threshold work as indicated on drawings or specified herein.
- (b) Alcoa Aluminum Threshold (Plain Type C) (Fluted Type (B) (F)) (Interlocking (D) (E)) (Type H) (Type R) (7032) (and) (miter strip 84781).
- (c) Fasteners.
- (d) Calking.
- (e) Shop drawings.

3. MATERIALS:

- (a) Threshold—extruded, Alcoa alloy 6063-T5, section *insert section selected.*
- (b) Fasteners—screw, Alcoa alloy 2024-T4.
- (c) Calking compound— *insert calking selected.*

4. FINISHES:

- (a) Exposed surfaces—(Mill Finish) (Satin Finish)* (Bright Finish)* (Alumilite Finish)*.

5. WORKMANSHIP, INSTALLATION:

- (a) Cut thresholds neatly to fit between jambs.
- (b) Set outside edge of exterior thresholds in full bed of calking compound.
- (c) Securely fasten thresholds in place with aluminum screws; drill, counter-sink threshold to receive screws. Space fasteners not over 10" apart; use one row of screws in center of thresholds not over 4" wide; use two rows of screws with staggered spacing in thresholds over 4" wide.
- (d) Provide thresholds of proper width for doors equipped with pivots, floor checking hinges and other floor-type operating hardware. Accurately cut, drill thresholds to receive boxes, plates, recesses, screws, etc.
- (e) At exterior thresholds, weatherproof joints at ends and along outside edge with calking compound.

See "Suggested Long Form Specifications" to complete specification.

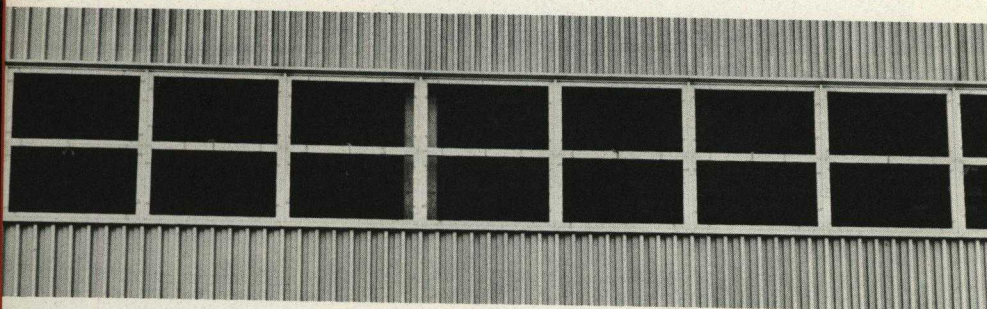
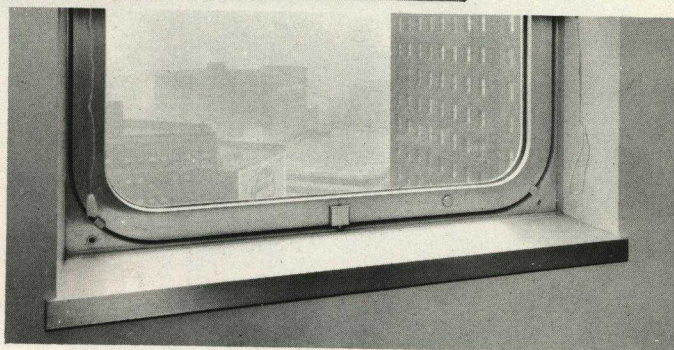
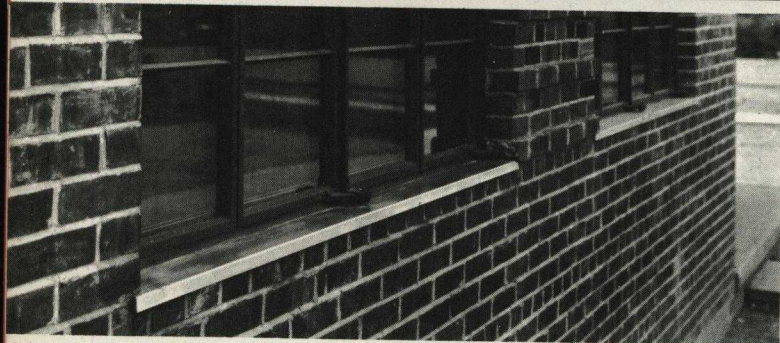
*It is suggested that a representative of Aluminum Company of America be consulted when specifying finishes other than standard "Mill Finish."

short form specification

Contractor shall furnish and install Alcoa Aluminum Thresholds (Type (B) (C) (D) (E) (F) (H) (R)), (7032) section *Insert section selected*, (and) (miter strip 84781) as indicated on the drawings. Workmanship and installation shall be in accordance with recommended standards of Aluminum Company of America.



ALCOA ALUMINUM
window sills



Window Sills of Alcoa Aluminum are primarily intended as a weathertight protection over mortar joints in masonry wall openings. Many sill sizes are available for use with varying wall thicknesses and with aluminum, wood or steel window sash. There are two types of sills stocked—one for **unit sill** openings, the other for either unit or **continuous sill** installation.

Alcoa's Type C Sill has been designed as an economic unit sill intended for window openings not wider than 6 feet. It should always be secured by using the **lug** or **slip-sill** method of installation, which means placing both ends of the sill at least $\frac{3}{4}$ " into slots provided under the window jambs. The sill's only anchorage is by this overlap at the jambs and by the window sash. Grouting should be used as support for the sill. (See details on opposite page.)

Alcoa's Type AA Sill is suitable as either a unit sill for single window openings up to 20 feet wide or as a continuous sill for openings of any length. This versatile system provides intermediate anchorage for the sill by means of anchor clips attached to the supporting wall. Again, mortar grouting should be used as bearing for the sill. (See details on following pages.)

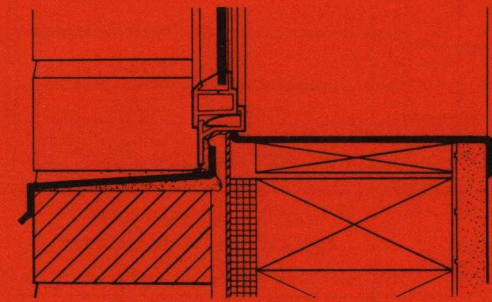
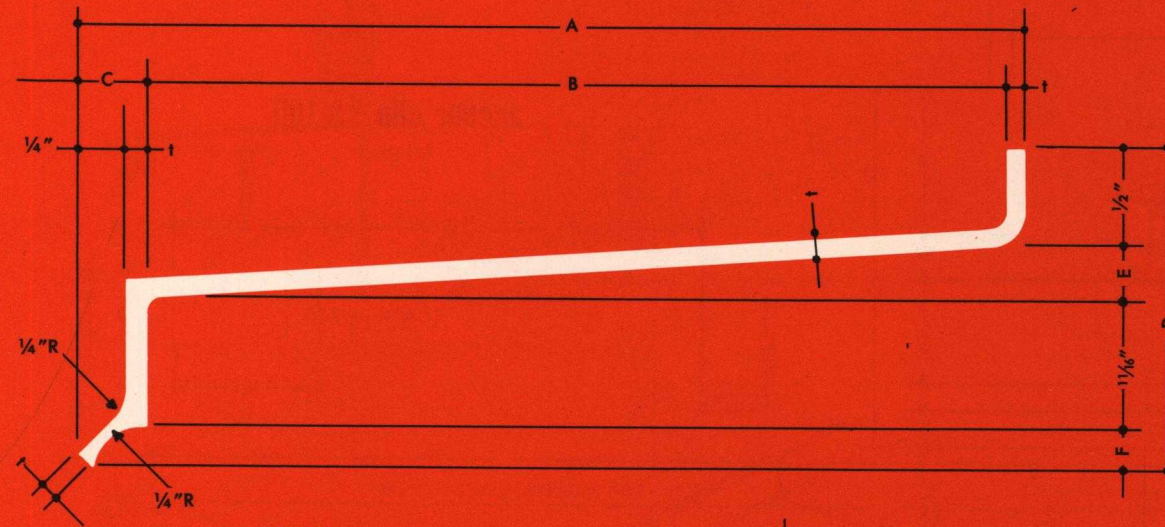


type C

For unit sills not wider than 6'; lug installation recommended

ALLOY 6063-T42

LENGTH—20 FT



SCALE—3"=1'



PLAN OF TYPE C SILL
TYPICAL UNIT INSTALLATION

Allow at least $\frac{1}{8}$ " space at ends of sill to permit expansion. Fill this space with resilient calking.

Dimensional requirements for interior stools vary so greatly that it is generally desirable to form these out of aluminum sheet, alloy 3003-H14, or No. 32 Alumi-lite Sheet where Alumi-lite finish is desired. See SHEET METAL PRODUCTS, this book.

window stool 26593

ALLOY 6063-T42

LENGTH—20 FT

EST WT PER FT—.720 LBS

full size

SECTION NUMBER	DIMENSIONS—INCHES							EST WT PER FT, LBS
	A	B	C	D	E	F	t	
37734	$3\frac{7}{16}$	3	$1\frac{1}{32}$	$1\frac{1}{16}$	$\frac{3}{16}$	$\frac{3}{16}$	$\frac{3}{32}$	.524
37735	$3\frac{15}{16}$	$3\frac{1}{2}$	$1\frac{1}{32}$	$1\frac{19}{32}$	$\frac{7}{32}$	$\frac{3}{16}$	$\frac{3}{32}$	.574
37736	$4\frac{7}{16}$	4	$1\frac{1}{32}$	$1\frac{5}{8}$	$\frac{1}{4}$	$\frac{3}{16}$	$\frac{3}{32}$	.636
37737	$4\frac{13}{16}$	$4\frac{1}{2}$	$1\frac{1}{32}$	$1\frac{21}{32}$	$\frac{9}{32}$	$\frac{3}{16}$	$\frac{3}{32}$	.691
37738	$5\frac{7}{16}$	5	$1\frac{1}{32}$	$1\frac{11}{16}$	$\frac{5}{16}$	$\frac{3}{16}$	$\frac{3}{32}$	.746
37739	$5\frac{15}{16}$	$5\frac{1}{2}$	$1\frac{1}{32}$	$1\frac{23}{32}$	$1\frac{1}{32}$	$\frac{3}{16}$	$\frac{3}{32}$	.804

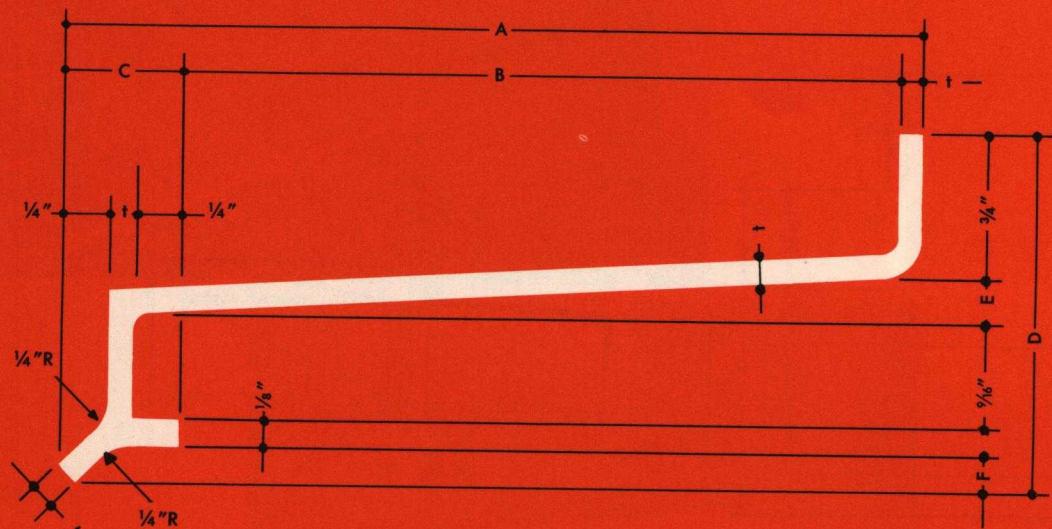
window sills

type AA

With anchor clip; for unit and continuous sills

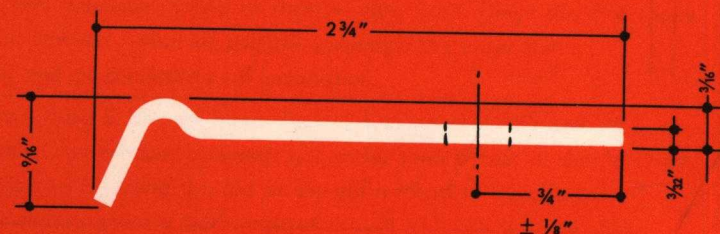
ALLOY 6063-T42

LENGTH—20 FT

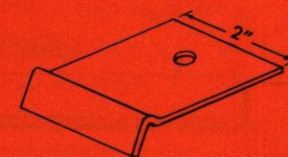
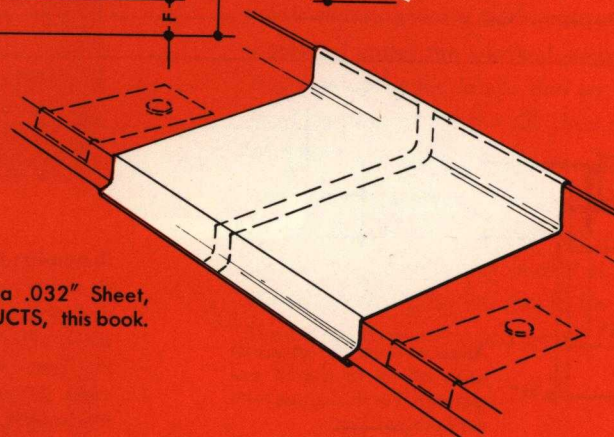


anchor clip SA-100

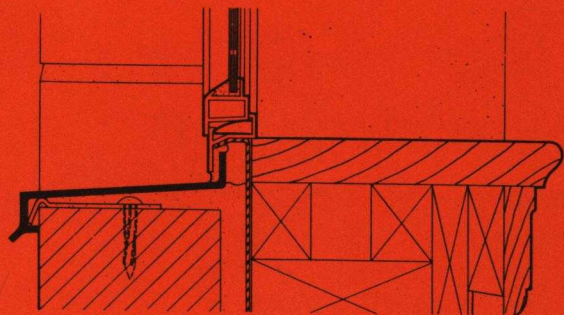
full size



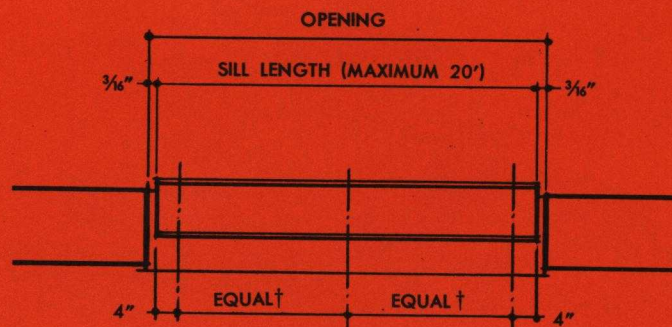
Joint Cover should be formed from Alcoa .032" Sheet, Alloy 3003-H14. See SHEET METAL PRODUCTS, this book.



SECTION NUMBER	DIMENSIONS—INCHES							EST WT PER FT, LBS	SECTION NUMBER	DIMENSIONS—INCHES							EST WT PER FT, LBS
	A	B	C	D	E	F	t			A	B	C	D	E	F	t	
54684	3 1/2	2 3/4	5/8	1 13/16	3/16	3/16	1/8	.767	54689	6	5 1/4	5/8	1 31/32	1 1/32	3/16	1/8	1.141
54685	4	3 1/4	5/8	1 27/32	7/32	3/16	1/8	.842	54690	6 5/16	5 3/4	2 1/32	2	3/8	3/16	5/32	1.529
54686	4 1/2	3 3/4	5/8	1 7/8	1/4	3/16	1/8	.919	54691	7 7/16	6 3/4	2 1/32	2 1/16	7/16	3/16	5/32	1.716
54687	5	4 1/4	5/8	1 29/32	9/32	3/16	1/8	.994	54692	8 1/8	7 1/4	1 1/16	2 5/32	1 3/32	1/4	3/16	2.189
54688	5 1/2	4 3/4	5/8	1 15/16	5/16	3/16	1/8	1.067	54693	9 1/8	8 1/4	1 1/16	2 7/32	1 7/32	1/4	3/16	2.414

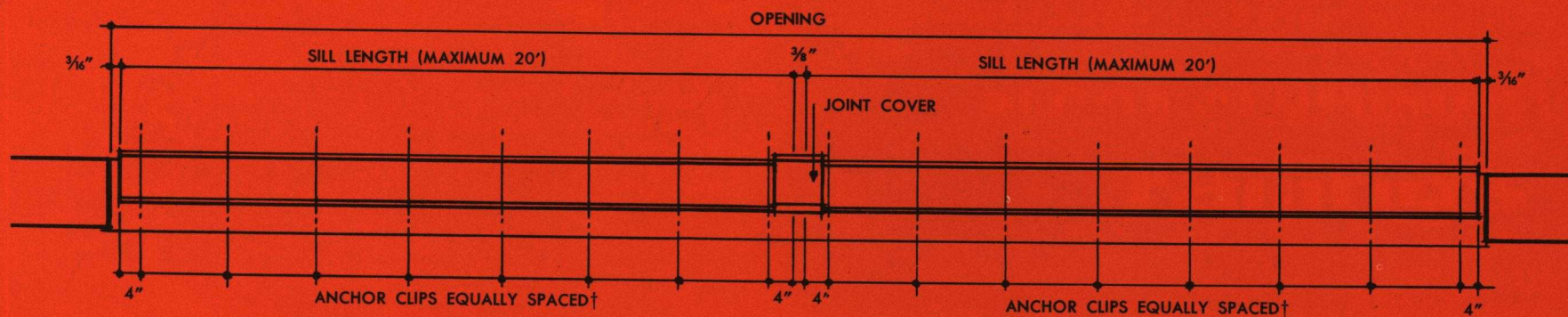


SCALE—3"=1'



PLAN OF TYPE AA SILL
TYPICAL UNIT INSTALLATION

†Anchor clip spacing to be not more than 3'0"



PLAN OF TYPE AA SILL—TYPICAL CONTINUOUS SILL INSTALLATION

†Anchor clip spacing to be not more than 3'0"

1. GENERAL CONDITIONS: See "Suggested Long Form Specifications."

2. WORK INCLUDED:

- (a) Furnish labor, materials and equipment to complete all aluminum window sill work as indicated on drawings or specified herein.
- (b) (Alcoa Aluminum Sill Type C) (Alcoa Aluminum Sill Type AA).
- (c) Anchors and fasteners.
- (d) (Calking) (and) (mastic) *when required*.
- (e) Shop drawings.

3. MATERIALS:

Insert one of the following listed types as required by job condition.

ALCOA SILL TYPE C

- (a) Sill—extruded, Alcoa alloy 6063-T42, section.....*insert section selected.*
- (b) Mastic compound *when required*—..... *insert mastic selected.*
- (c) Calking compound—..... *insert calking selected.*

ALCOA SILL TYPE AA

- (a) Sill—extruded, Alcoa alloy 6063-T42, section *insert section selected.*
- (b) Joint covers—formed sheet, Alcoa alloy 3003-H14, .032" thick, 6" wide.

- (c) Anchor clips—formed sheet, Alcoa alloy 3003-H14, .090" thick, 2" wide, Part No. SA-100.
- (d) Fasteners—(2" masonry nails, cadmium plated) (screws, Alcoa alloy 2024-T4).
- (e) Calking compound—..... *insert calking selected.*

4. FINISHES:

- (a) Exposed surfaces—(Mill Finish) (Satin Finish)* (Bright Finish)* (Alumilite Finish)*.

5. WORKMANSHIP, INSTALLATION:

- (a) Cut sills neatly to fit between jambs. Provide $\frac{3}{8}$ " for expansion of each 20' length of Type AA sill.
- (b) Where sill anchors are required, install to proper and true line, one anchor clip with fastener 4" from each end of sill with intermediate anchor clips and fasteners spaced not more than 3'-0" apart.
- (c) Sill Type AA expansion joints—covered with joint covers.
- (d) Sill Type C—installed in single length only, maximum opening 6'-0", lug sill installation, bedding mortar—raked out $\frac{1}{2}$ " from sill end to provide space for sill expansion, face of joint—closed with calking compound.

See "Suggested Long Form Specifications" to complete specification.

*It is suggested that a representative of Aluminum Company of America be consulted when specifying finishes other than standard "Mill Finish."

short form specification

Contractor shall furnish and install Alcoa Aluminum Window Sills (Type C) (Type AA), section... *Insert section selected* as indicated on drawings. Workmanship and installation shall be in accordance with recommended standards of Aluminum Company of America.



ALCOA ALUMINUM
railings



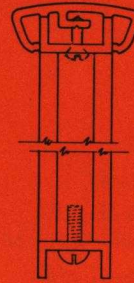
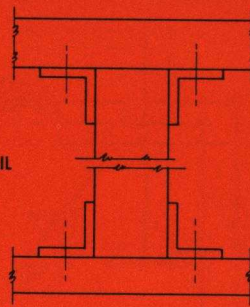
the extruded aluminum railing sections and cast aluminum railing accessories stocked by Alcoa distributors have been widely accepted by architects and metal fabricators as being highly practical, as well as thoroughly adaptable to a variety of ornamental railing installations. Still other original railing designs can be created from the stock shapes shown in the WIRE—ROD—BAR and PIPE—TUBE sections of this book.

For heavy-duty railings in service areas, Alcoa offers an aluminum pipe railing system in two sizes of pipe and flush fittings. The system has been designed to meet the most severe railing requirements at a relatively low cost. Its fittings assure fast erection and provide a smooth, projection-free railing.

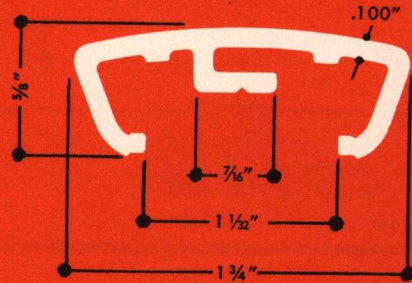
The attractive appearance of Alcoa Aluminum Ornamental Railings and Pipe Railings may be retained, even in locations subjected to much use, by specifying an Alumilite treatment. The aluminum alloys used for all these railing components have been selected because of their similarity, both in texture and final finish, after Alumilite treatment.



TYPICAL PORCH RAIL

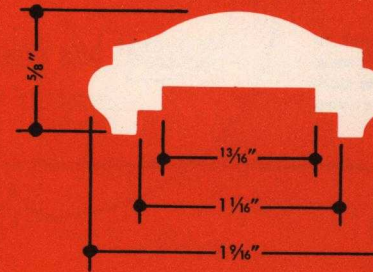


ornamental railings



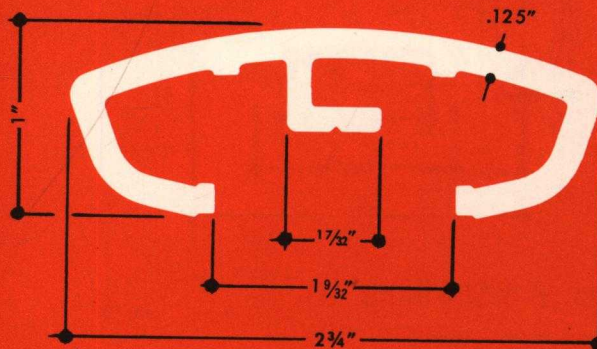
rail 87067

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.446 LBS
Mating Channel 1940
8-32 x 1/2" long oval
head machine screw



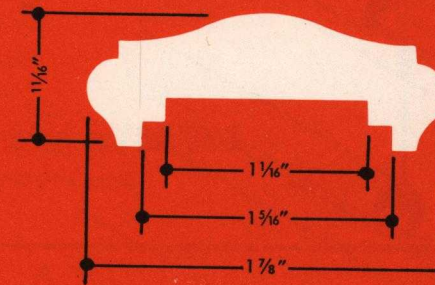
rail 66293

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.614 LBS
Mating Channel 1940
10-24 x 7/8" long oval
head machine screw



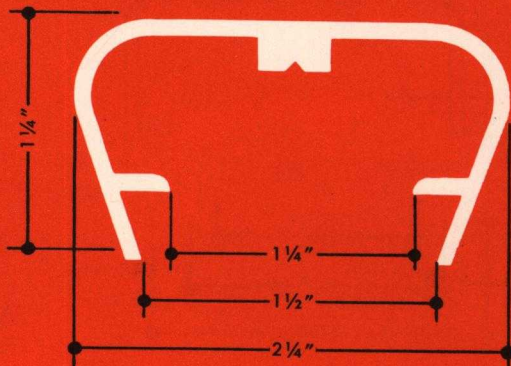
rail 87068

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.871 LBS
Mating Channel 87071
10-24 x 3/4" long oval
head machine screw



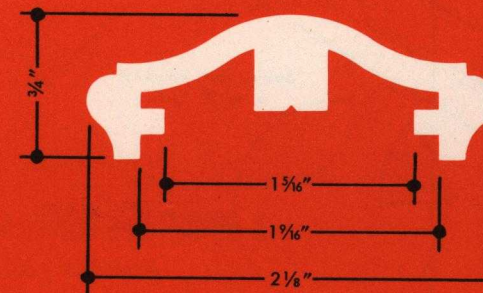
rail 66295

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.835 LBS
Mating Channel 4286
10-24 x 7/8" long oval
head machine screw



rail 25300

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.694 LBS
Mating Channel 4300
10-24 x 1 1/4" long oval
head machine screw

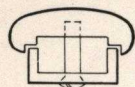


rail 23681

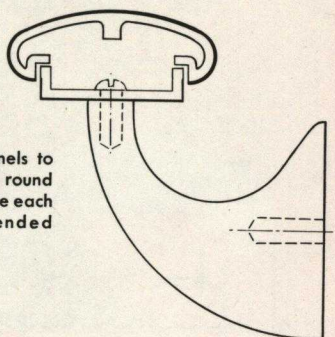
ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.690 LBS
Mating Channel 4300
10-24 x 7/8" long oval
head machine screw

Extruded sections indicated in white are full size

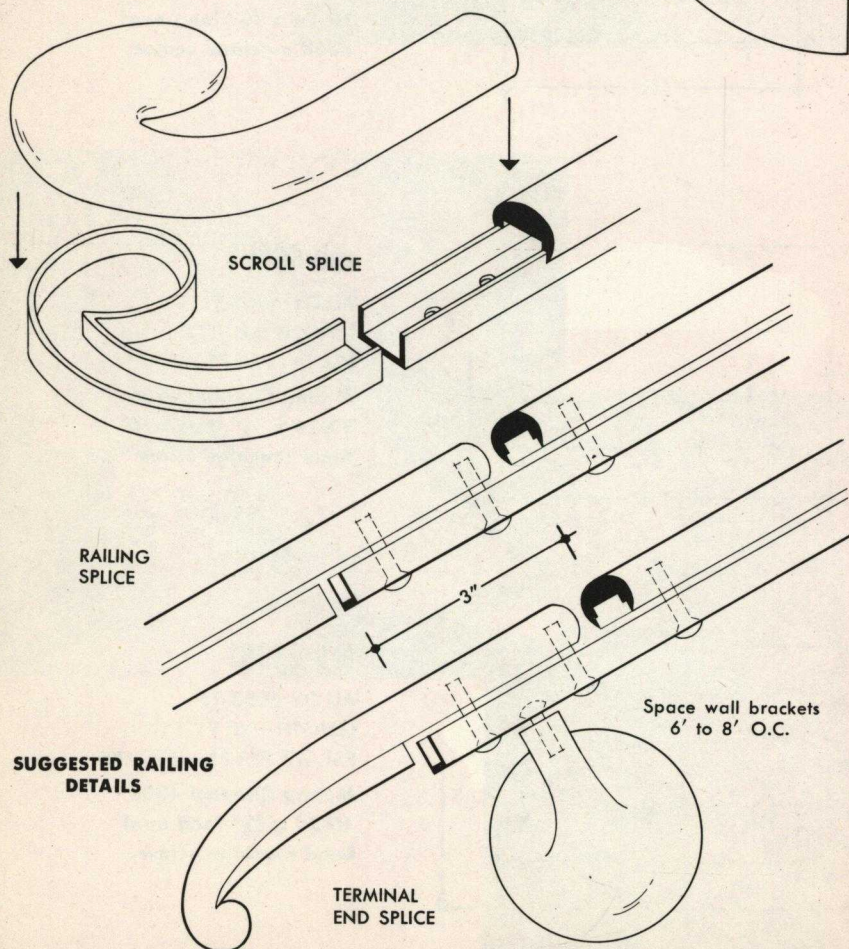
ornamental railings



Fasten all rails to mating channels with aluminum oval head machine screws; see each rail for recommended screw size.



Fasten all mating channels to brackets with aluminum round head machine screws; see each bracket for recommended screw size.

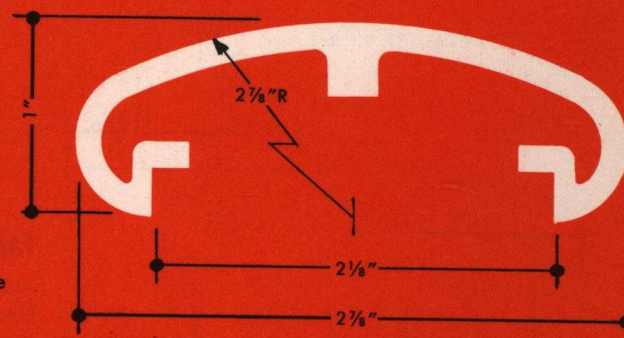


SUGGESTED RAILING DETAILS

rail 16505

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.852 LBS
Mating Channel 2388
6-32 x 1 1/8" long oval
head machine screw

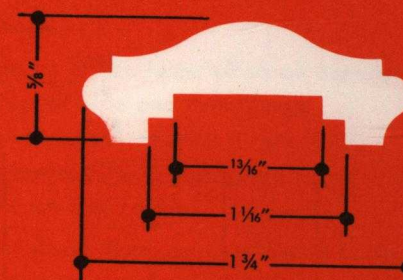
Accessories at right available



rail 66294

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.716 LBS
Mating Channel 1940
10-24 x 7/8" long oval
head machine screw

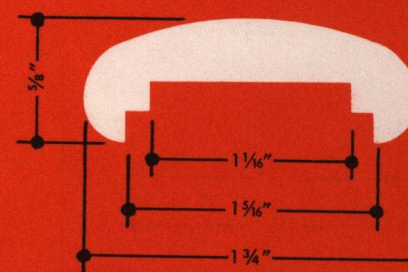
Accessories at right available



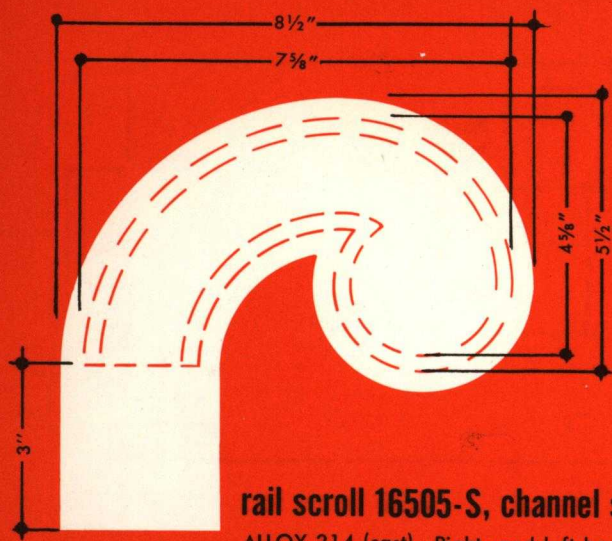
rail 20609

ALLOY 6063-T5
LENGTH—20 FT
EST WT PER FT—.770 LBS
Mating Channel 4286
10-24 x 7/8" long oval
head machine screw

Accessories at right available

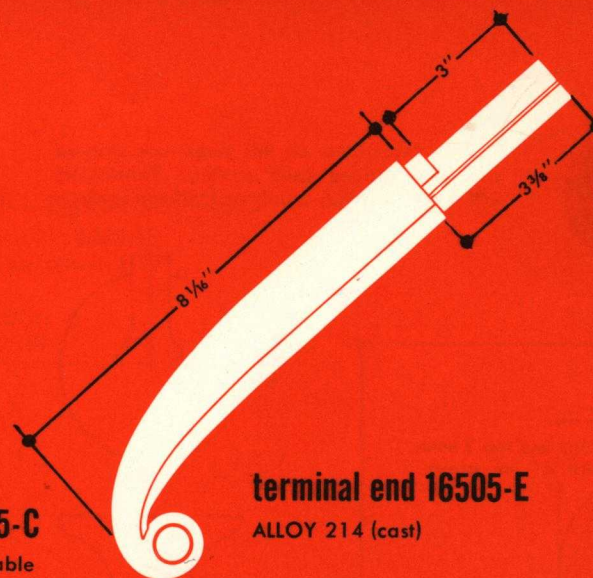


Extruded sections indicated in white are full size



rail scroll 16505-S, channel scroll 16505-C

ALLOY 214 (cast) Right- and left-hand scrolls available



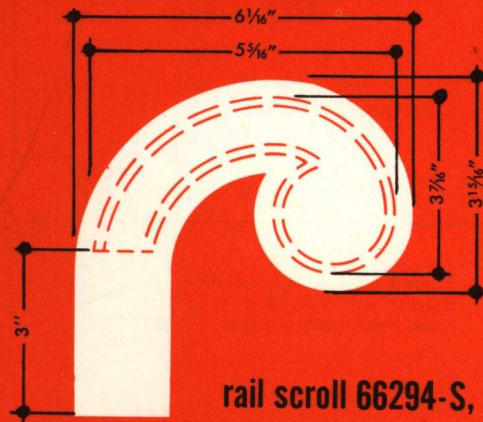
terminal end 16505-E

ALLOY 214 (cast)

ornamental railings

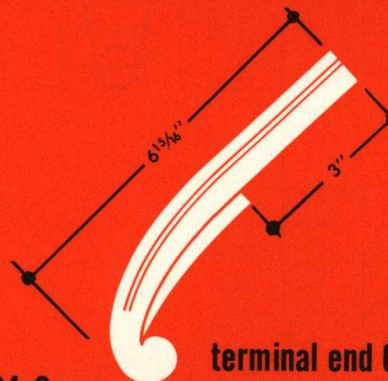
Railing accessories on this page are stocked as rough ground sand castings. Fabricators will have to grind, polish and otherwise finish them to match final finish on extruded rails.

BRACKET 16505-B (303-B) or **BRACKET 302-B** is suitable for **RAIL 16505**—see following page



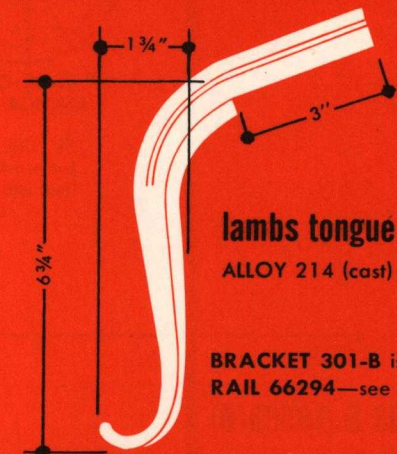
rail scroll 66294-S, channel scroll 66294-C

ALLOY 214 (cast) Right- and left-hand scrolls available



terminal end 66294-E

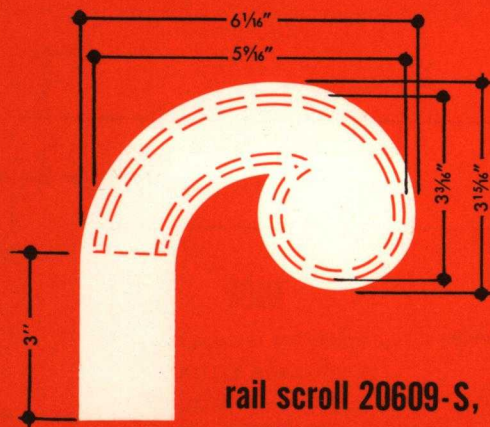
ALLOY 214 (cast)



lambs tongue 66294-L

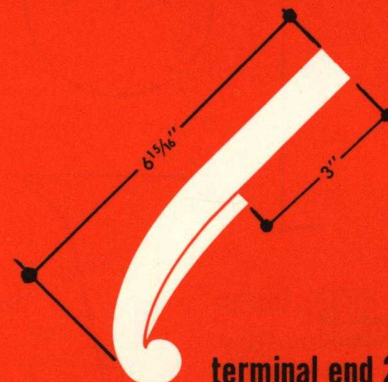
ALLOY 214 (cast)

BRACKET 301-B is suitable for **RAIL 66294**—see following page



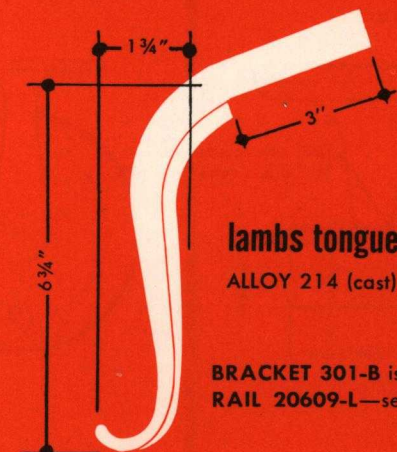
rail scroll 20609-S, channel scroll 20609-C

ALLOY 214 (cast) Right- and left-hand scrolls available



terminal end 20609-E

ALLOY 214 (cast)



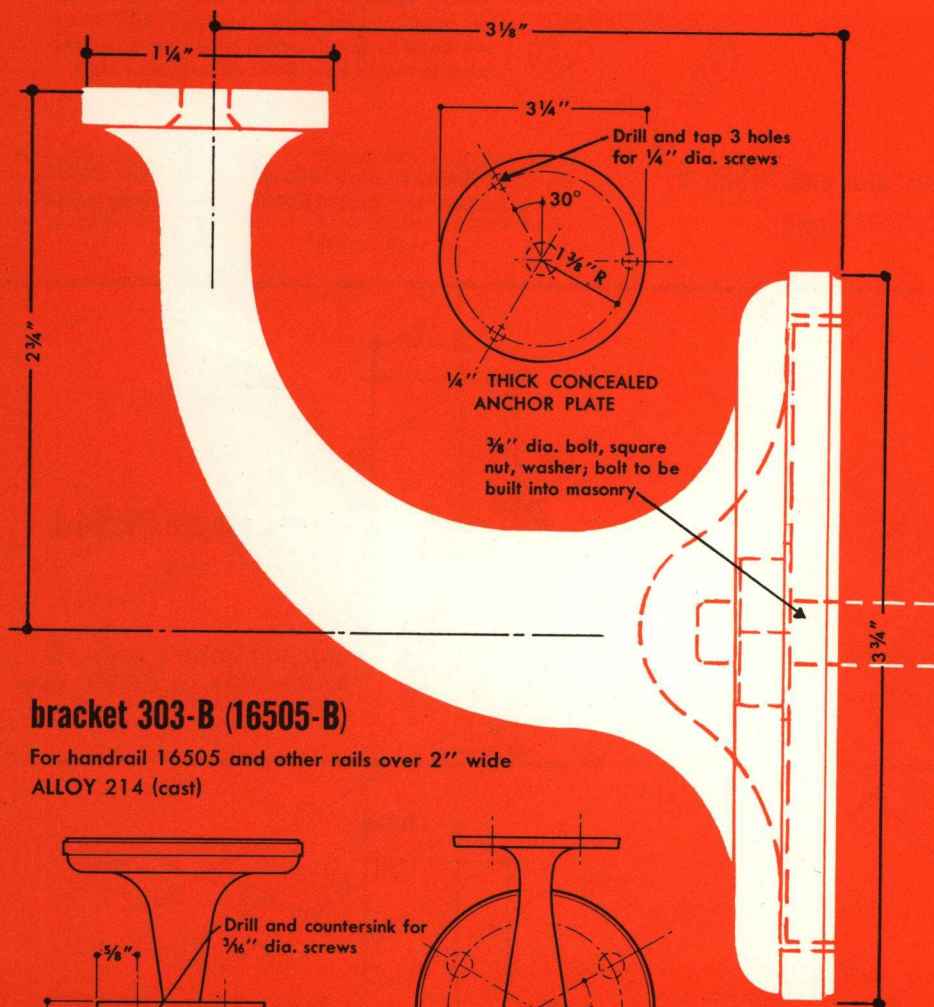
lambs tongue 20609-L

ALLOY 214 (cast)

BRACKET 301-B is suitable for **RAIL 20609-L**—see following page

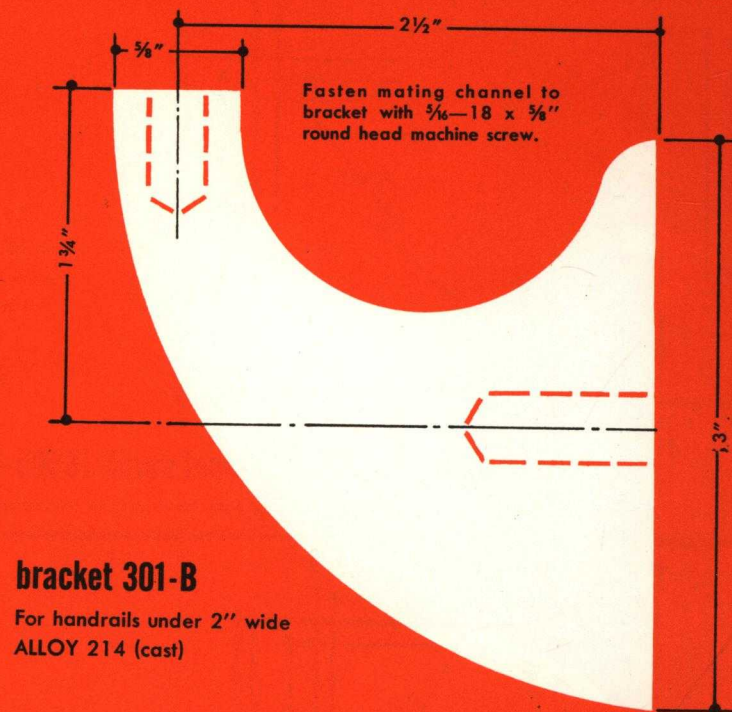
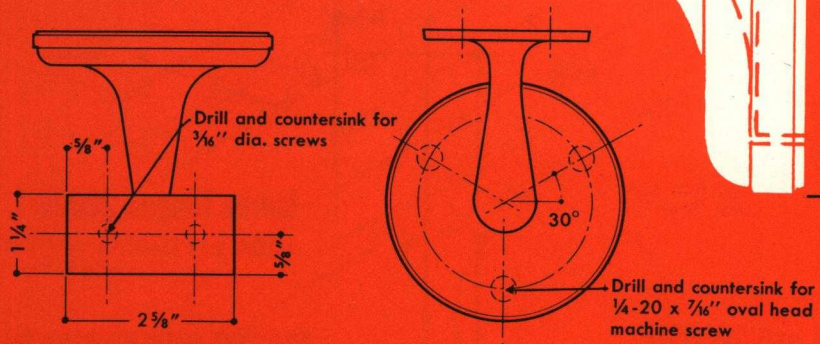
ornamental railings

Railing accessories on this page are stocked as rough ground sand castings. Fabricators will have to grind, polish and otherwise finish.



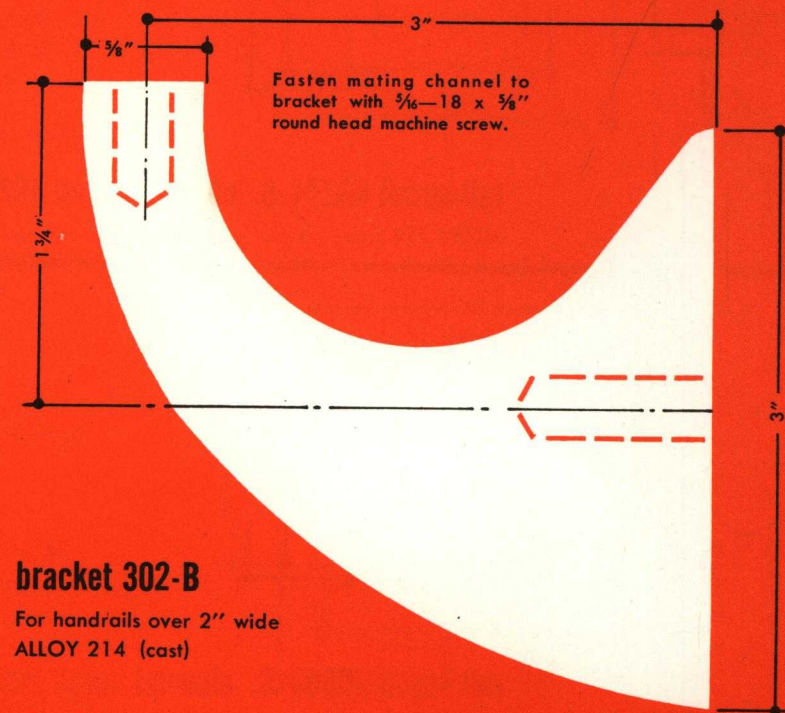
bracket 303-B (16505-B)

For handrail 16505 and other rails over 2" wide
ALLOY 214 (cast)



bracket 301-B

For handrails under 2" wide
ALLOY 214 (cast)

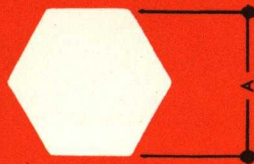


bracket 302-B

For handrails over 2" wide
ALLOY 214 (cast)

Sections indicated in white are full size

ornamental railings



hexagonal balusters

ALLOY 6063-T5

LENGTH—16 FT

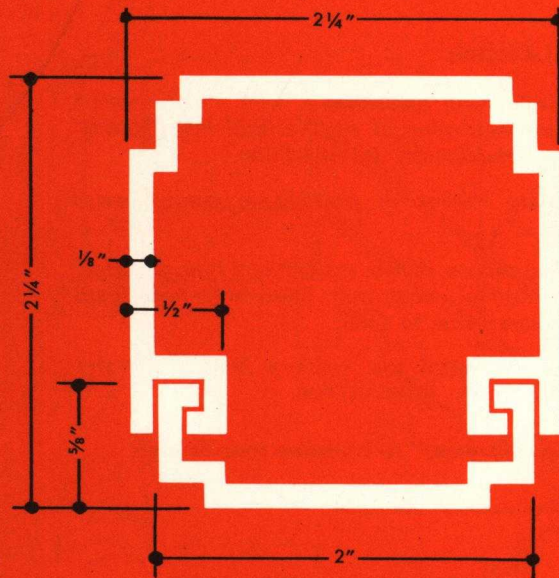
DIMENSION A INCHES	EST WT PER FT, LBS
$\frac{1}{2}$	.259
$\frac{3}{4}$	.586
1	1.039
$1\frac{1}{2}$	2.237

newel 6800

ALLOY 6063-T5

LENGTH—16 FT

EST WT PER FT—1.087 LBS



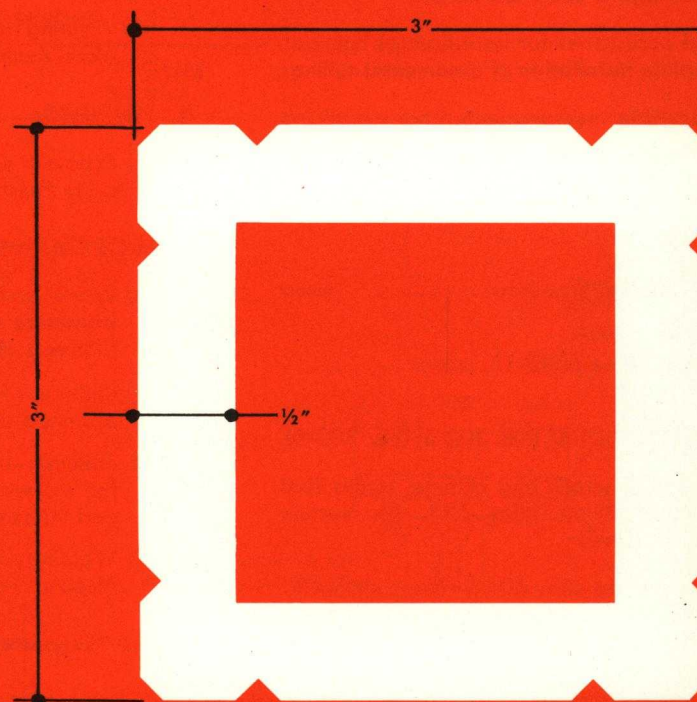
6801

Also suitable for individual use as trim

ALLOY 6063-T5

LENGTH—16 FT

EST WT PER FT—.488 LBS



newel 34096

ALLOY 6063-T5

LENGTH—16 FT

EST WT PER FT—5.875 LBS

A variety of sizes in round, square and rectangular shapes are also available for handrails, balusters or newels. See ROD and BAR or PIPE and TUBE, this book.



Extruded sections indicated in white are full size

1. GENERAL CONDITIONS: See "Suggested Long Form Specifications."

2. WORK INCLUDED:

- (a) Furnish labor, materials and equipment to complete aluminum ornamental railings indicated on drawings or specified herein.
- (b) Work shall include all parts and accessories for variations of fabricating techniques required for complete installation of ornamental railings.
- (c) Shop drawings. Obtain shop drawing measurements from actual job conditions.

3. MATERIALS:

- (a) Handrail—extruded, Alcoa alloy 6063-T5, section.....*insert section selected.*
- (b) Handrail channel—extruded, Alcoa alloy 6063-T5, section.....*insert section selected.*
- (c) Brackets—cast, Alcoa alloy 214, (No. 301-B) (No. 302-B) (No. 303-B).
- (d) (Terminal ends) (Lamb's tongues) (Rail scrolls and channel scrolls (left hand) (and) (right hand))—cast, Alcoa alloy 214, for section..... *Insert same section as above.*
- (e) Newels *when required*—extruded, Alcoa alloy 6063-T5, section (6800 and 6801) (34096).

- (f) Balusters *when required*—extruded, Alcoa alloy 6063-T5.
- (g) (Bars) (Rods) *when required*—extruded, Alcoa alloy 6063-T5. Tubing *when required*—extruded or drawn, Alcoa 3003, 5052, 6061, 6063.
- (h) Fasteners *when required*—screws, Alcoa alloy 2024-T4.
- (i) Welding rod *when required*—Alcoa alloy as per Alcoa's *Welding Alcoa Aluminum*, latest edition.

4. FINISHES:

- (a) Exposed surfaces—(Mill Finish) (Satin Finish)* (Bright Finish)* (Alumilite Finish)*.

5. WORKMANSHIP, INSTALLATION:

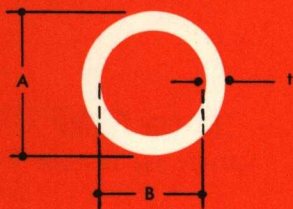
- (a) Workmanship and installation—in accordance with recommended standards as per National Association of Architectural Metal Manufacturers *Architectural Metal Handbook*, latest edition.
- (b) Railings—fabricated in shop insofar as possible to measurements obtained at project site.
- (c) Railings—made and erected square, plumb, straight and true, designed for adjustment to field variations, accurately fitted with tight joints and intersections. Curved work—true to radii.
- (d) Welding—inert gas shielded metal arc welding method as per Alcoa's *Welding Alcoa Aluminum*, latest edition.

See "Suggested Long Form Specifications" to complete specification.

*It is suggested that a representative of Aluminum Company of America be consulted when specifying finishes other than standard "Mill Finish."

short form specification

Contractor shall furnish and install ornamental railings of Alcoa aluminum as indicated on drawings. Workmanship and installation shall be in accordance with recommended standards of National Association of Architectural Metal Manufacturers.

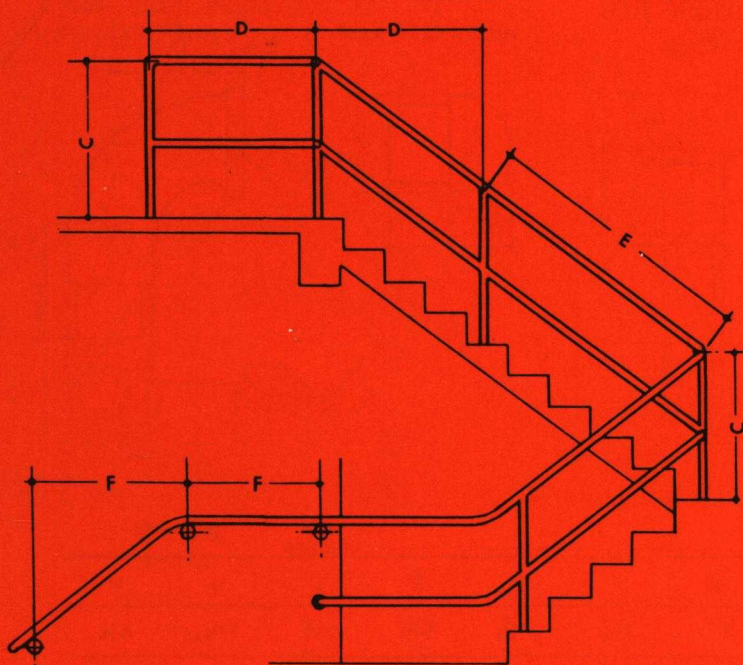


ALLOY 6063-T832
LENGTH—20 FT

pipe railings

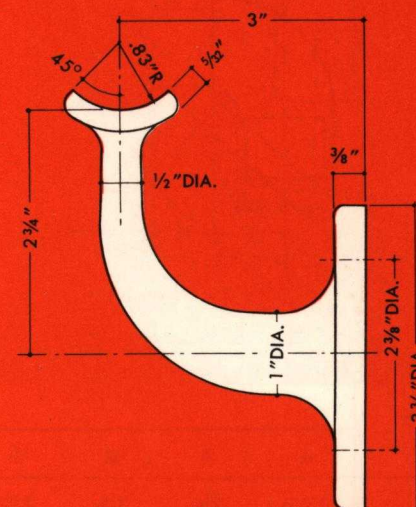
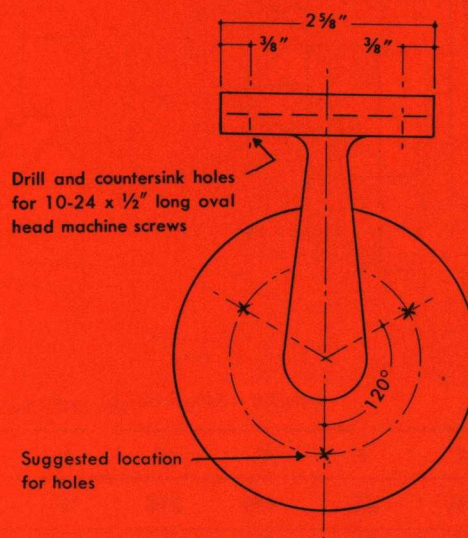
NOMINAL PIPE SIZE INCHES	PIPE DIMENSIONS—INCHES			CROSS-SECTION WALL AREA SQ INCHES	EST WT PER FT, LBS	MIN. RADII FOR BENDS INCHES
	A	B	t			
1¼	1.660	1.380	.140	.669	.786	6¾
1½	1.900	1.610	.145	.799	.940	7¾

NOMINAL PIPE SIZE INCHES	RECOMMENDED POST SPACING			POST HEIGHT C—MAX.	BRACKET SPACING F
	LEVEL D—MAX.	35° SLOPE E—MAX.	40° SLOPE E—MAX.		
1¼	5'8"	6'11"	7'5"	3'6"	Where handrails are supported by handrail brackets, dimension "F" is limited by strength of bracket-to-wall anchorage condition. Generally, the spacing of such brackets should not exceed 4'6".
1½	7'0"	8'7"	9'2"	3'6"	



pipe rail bracket

ALLOY B214 (cast)



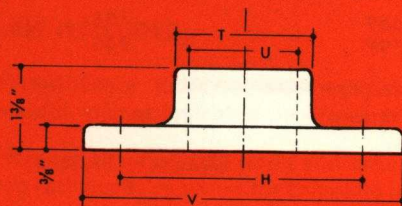
pipe railings

fittings, flush type—90°

Railing accessories on these pages are stocked as rough ground sand castings.

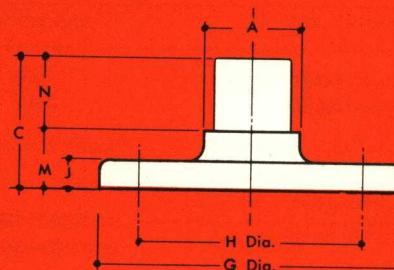
cover flange

ALLOY B214 (cast)



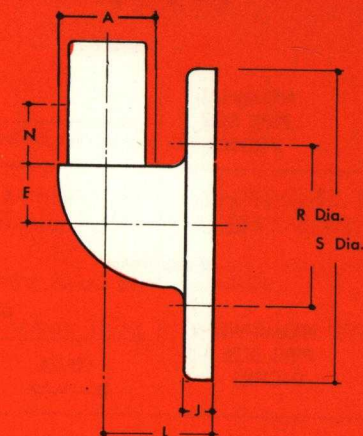
floor flange

ALLOY 6061-T6 (forged)



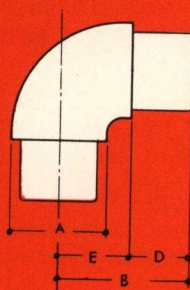
fascia flange

ALLOY 356-T6 (cast)



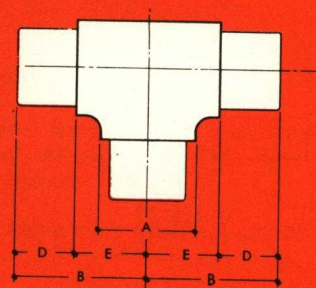
elbow

ALLOY B214 (cast)



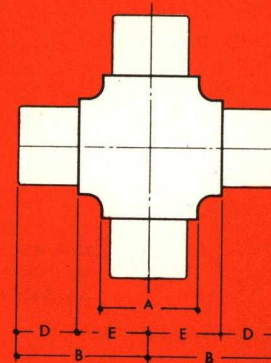
tee

ALLOY B214 (cast)



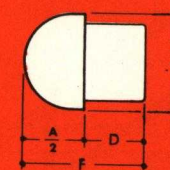
cross

ALLOY B214 (cast)



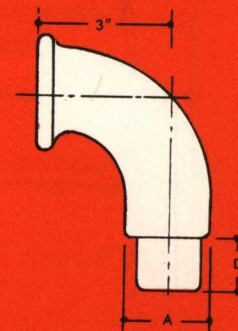
terminal cap

ALLOY B214 (cast)



terminal return

ALLOY B214 (cast)



PIPE SIZE
INCHES

DIMENSIONS—INCHES

1 1/4

1 2 1/32

2 1/2

3 1/16

1 1/4

1 1/4

2 5/8

4 5/8

3 1/4

3/8

1 13/16

1

2 1/16

3 15/16

5 5/16

2 1/8

1 43/64

4 7/8

1 1/2

1 29/32

2 3/4

3 1/2

1 1/4

1 1/2

2 13/64

5 1/8

3 3/4

7/16

1 29/32

1 1/16

2 7/16

4 1/4

5 5/8

2 13/32

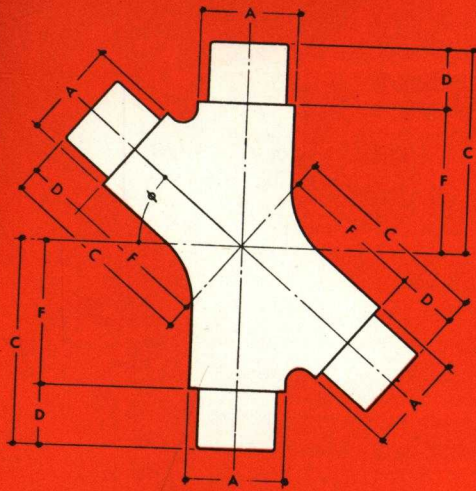
1 59/64

5 3/16

fittings, flush type—35° and 40°

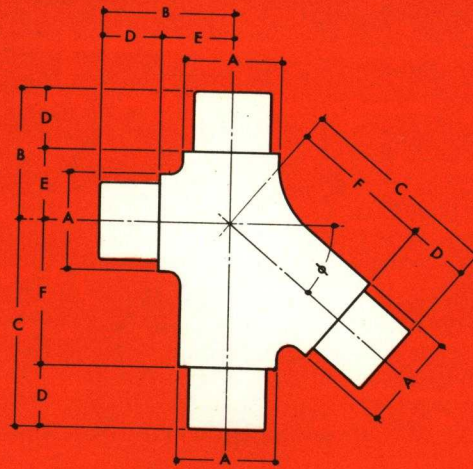
vertical angle cross

ALLOY B214 (cast)



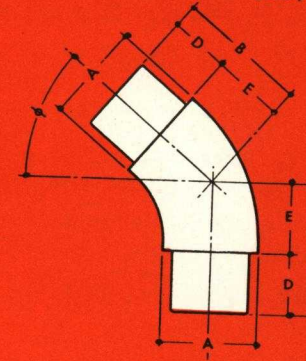
half vertical angle cross

ALLOY B214 (cast)



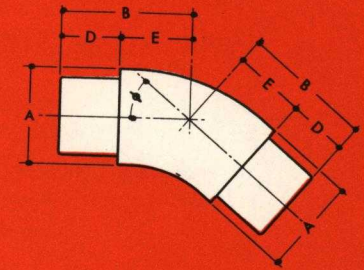
vertical angle ell

ALLOY B214 (cast)



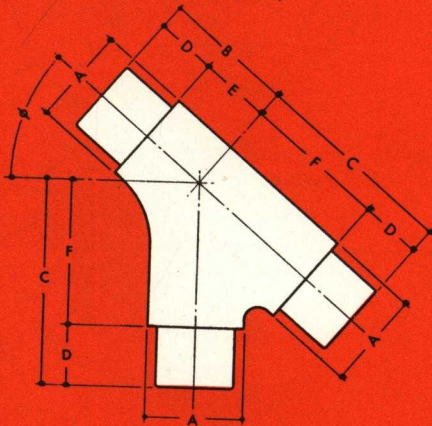
horizontal angle ell

ALLOY B214 (cast)



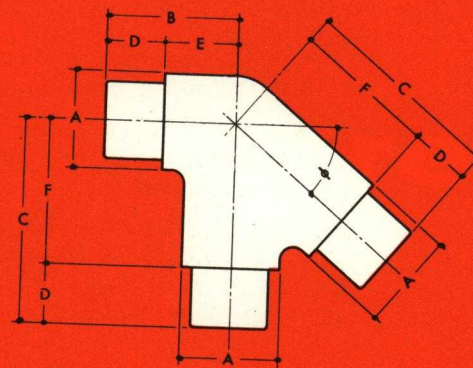
horizontal angle tee

ALLOY B214 (cast)



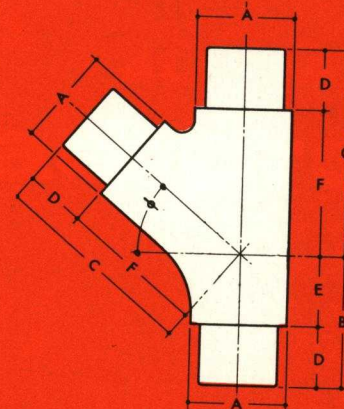
half horizontal angle tee

ALLOY B214 (cast)



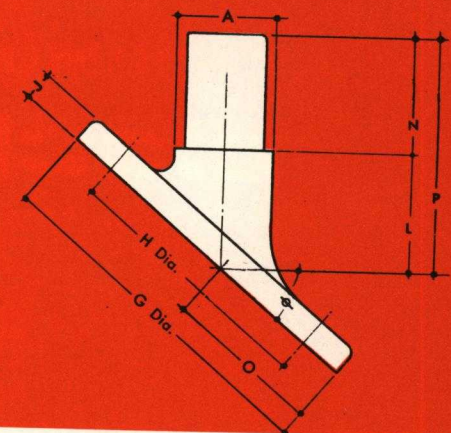
vertical angle tee

ALLOY B214 (cast)



angle flange

ALLOY 6061-T6 (forged)



PIPE SIZE INCHES	ANGLE °	DIMENSIONS—INCHES												
		A	B	C	D	E	F	G	H	J	L	N	O	P
1 1/4	35°	1 21/32	2 1/2	3 1/4	1 1/4	1 1/4	2	5 1/8	3 3/4	3/8	1 13/16	2 1/16	2	3 7/8
	40°	1 21/32	2 1/2	3 1/2	1 1/4	1 1/4	2 1/4	5 1/8	3 3/4	3/8	2 1/8	2 1/16	2	4 1/16
1 1/2	35°	1 29/32	2 3/4	3 5/16	1 1/4	1 1/2	2 5/16	5 5/16	3 11/16	7/16	2 1/16	2 7/16	2 3/32	4 1/2
	40°	1 29/32	2 3/4	3 13/16	1 1/4	1 1/2	2 5/16	5 5/16	3 11/16	7/16	2 1/4	2 7/16	2 3/32	4 11/16

1. GENERAL CONDITIONS: See "Suggested Long Form Specifications."

2. WORK INCLUDED:

- (a) Furnish labor, materials and equipment to complete aluminum pipe handrailings indicated on drawings or specified herein.
- (b) Work shall include all parts and accessories for all variations of fabricating techniques required for a complete installation.
- (c) Shop drawings. Obtain shop drawing measurements from actual job conditions.

3. MATERIALS:

- (a) Pipe—Alcoa alloy 6063-T832, (1¼) (1½)" diameter I.P.S.
- (b) Brackets and fittings, except floor, fascia and angle flanges—cast, Alcoa alloy B214.
- (c) Fascia flanges—cast, Alcoa alloy 356-T6.
- (d) Floor and angle flanges—forged, Alcoa alloy 6061-T6.
- (e) Pipe sleeves—Alcoa alloy 6063-T6.
- (f) Fasteners **when required**—screws, Alcoa alloy 2024-T4.
- (g) Welding rod **when required**—Alcoa alloy as per Alcoa's *Welding Alcoa Aluminum*, latest edition.

- (h) Sleeve filler—(Leadite, Leadite Company, Philadelphia, Pa.) (Hydro-Tite, Hydraulic Development Corporation, New York) (Basolit, Nukem Products Corp., Buffalo, N.Y.) (sulfur).

4. FINISHES:

- (a) Exposed surfaces—(Mill Finish) (Satin Finish)* (Bright Finish)* (Aluminate Finish)*.

5. WORKMANSHIP, INSTALLATION:

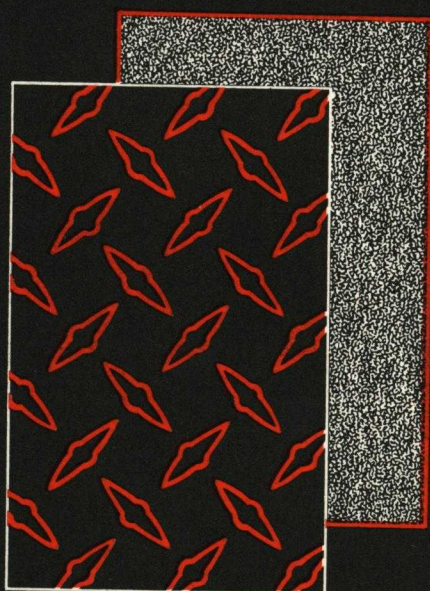
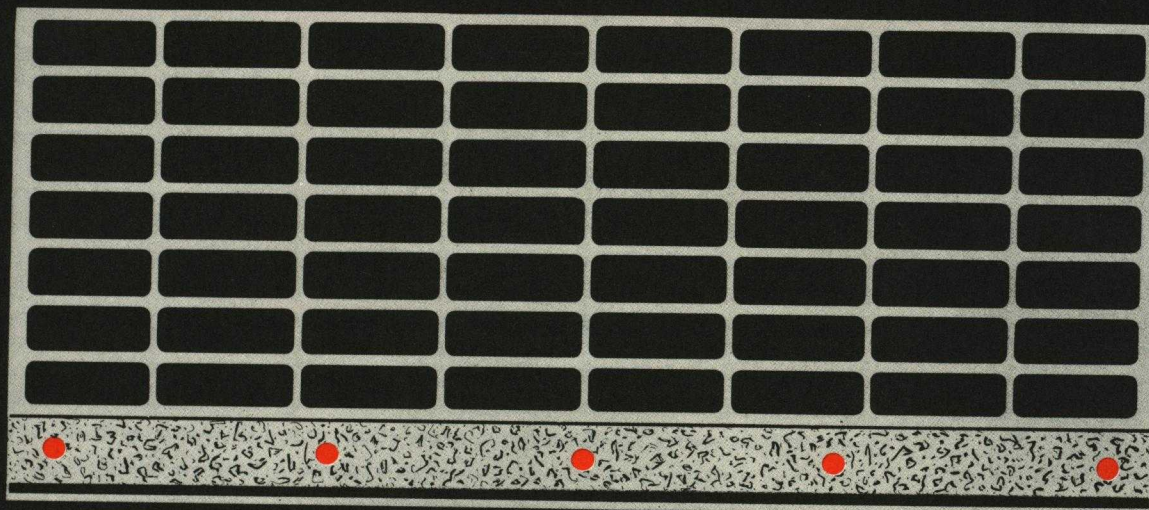
- (a) Railings—fabricated in shop insofar as possible to measurements obtained at project site.
- (b) Railings—made and erected square, plumb, straight and true, designed for adjustment to field variations, accurately fitted with tight joints and intersections. Curved work—true to radii.
- (c) Fittings—fastened to pipe members by (inert gas shielded metal arc welding method as per Alcoa's *Welding Alcoa Aluminum*, latest edition) (Jackson head machine screws).
- (d) Pipe sleeves **when required** shall allow ¼" clearance between pipe and sleeve. Set into concrete minimum 4". Top of sleeve—flush with top of concrete.
- (e) Insert pipe in sleeve; fill space between sleeve and pipe with sleeve filler. CAUTION: Do not use lead.

See "Suggested Long Form Specifications" to complete specification.

*It is suggested that a representative of Aluminum Company of America be consulted when specifying finishes other than standard "Mill Finish."

short form specification

Contractor shall furnish and install pipe railings of Alcoa aluminum as indicated on drawings. Workmanship and installation shall be in accordance with recommended standards of Aluminum Company of America.



ALCOA ALUMINUM
tread products



Safer footing for workers has rightfully become an important objective in industrial building planning.

Alcoa warehouses stock several low-cost "tread products" that meet this need.

There is, for example, a precision-cast aluminum stair tread made from a special high-strength, corrosion-resistant alloy. Since it requires no painting, the grating-type tread assures long-term maintenance savings even when exposed to extreme weathering or corrosive atmospheres. The design makes this kind of stair easy to keep clean in manufacturing industries where cleanliness is critical.

Alcoa also offers two types of aluminum tread plate—one with an unusual abrasive surface, the other with the old standard diamond pattern. Both tread plates are excellent for locations requiring metal, skid-resistant floors. Their surfaces reduce slipping hazards, their light weight minimizes dead load and their nonsparking characteristics give safety in areas where combustibles are present.



Alcoa Stair Treads (grating type)

stair tread

Except for the abrasive-nosing, Alcoa's grating-type stair treads are die-cast in one piece from a strong, highly corrosion-resistant alloy. The method has eliminated many normal fabricating costs and at the same time produced a stronger product. With this tread concentrated loads are distributed more uniformly over the bearing bars. Although designed to carry the weight of a heavy man, the tread has withstood loads in excess of 3,000 pounds. The abrasive nosing on the step, made from Alcoa Abrasive Tread Plate (see following page), has unequalled skid resistance and adds a large measure of safety to the stairway.

Alcoa Aluminum Stair Treads are especially suited to installation wherever sanitary standards must be kept high—in food packing plants, bakeries, dairies, breweries, pharmaceutical plants, etc. The one-piece grating with its rounded corners does away with cracks and crevices that trap dirt and assures easy, economical cleaning when desired.

The treads are excellent, too, for use in industries subject to highly contaminated atmospheres or extreme weathering. The metal's remarkable resistance to corrosion without requiring maintenance recommends these treads for plants engaged in chemical processing, food handling, refining, sewage treatment, papermaking.

AVAILABLE SIZES AND WEIGHTS

WIDTH A	LENGTH B				NO. OF BEARING BARS
	24"	30"	36"	42"	
10"	8.3 lbs	10.0 lbs	11.8 lbs	13.5 lbs	8
8 ²⁷ / ₃₂ "	7.4	9.0	10.6	12.2	7
7 ¹ / ₁₆ "	6.6	8.0	9.4	10.8	6
6 ¹ / ₃₂ "	5.8	7.0	8.2	9.5	5

MATERIAL SPECIFICATION

- Bearing Bars (nom. dimen.): $\frac{5}{32}$ " x $1\frac{1}{2}$ " on 3" centers
- Crossbars (nom. dimen.): $\frac{1}{8}$ " x 1" spaced on $1\frac{1}{32}$ " centers
- Carrier Plates: Mounting holes located according to accepted standards. Mounting plates are $\frac{5}{16}$ " thick
- Abrasive Nosing: Made of Alcoa Abrasive Tread Plate

FINISH

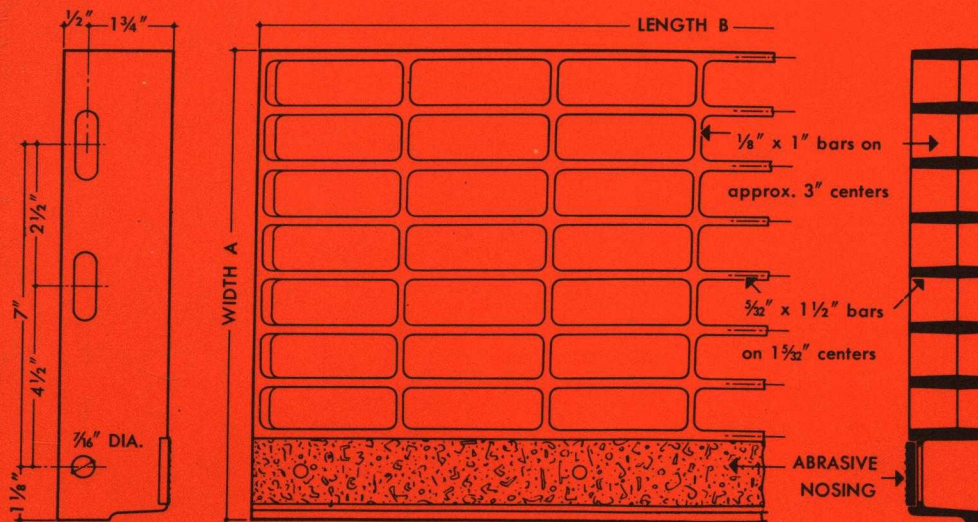
STRUCTURAL or AS-FABRICATED FINISH, the smooth gray surface which naturally results from the casting process, is recommended for most standard industrial purposes. Casting flash and gates are trimmed to within $\frac{1}{32}$ ".

POLISHED FINISH is recommended where sanitary stairways are required, such as in food processing plants. The top surface is belt sanded to a high luster and the nose is hand polished. A clear lacquer coating is applied to prevent tarnishing.

MARINE FINISH is recommended for installations subject to sea water immersion and spray. It consists of Alumilite 705 treatment followed by a thin coat of aluminum paint. Alumilite provides maximum corrosion resistance, while the paint is for a bright appearance only.

INSTALLATION

Steel stringers to which Alcoa Aluminum Stair Treads are to be bolted should be primed with a shop coat. The faying surfaces of the flanges or carrier plates at both ends of the tread should be coated with a good quality mastic. Bolts should be aluminum or hot-dipped galvanized steel.



Abrasive Tread Plate

ALLOY 3003

- This rough, aluminum oxide-surfaced plate is skid-proof even when coated with oil, grease or water. Wear serves only to renew the rough surface by uncovering additional abrasive particles imbedded beneath the original surface.
- Smooth reverse side.

DIMENSIONS—INCHES	
THICKNESS	SIZE
.250 ^①	24 x 72; 36 x 96; 36 x 120; 48 x 120; 48 x 144
.188	
.125	
.063	

^①Allowable uniform load of 100 psf on 2' span

FABRICATING RECOMMENDATIONS

SHEARING may be done on conventional plate shears similar to 3003 plate, keeping abrasive side up for minimum burr.

SAWING may be accomplished on bandsaw with coarse, carbon steel blade (4 teeth per inch) running at about 250 fpm. Abrasive side should be placed down, and water soluble cutting oil used.

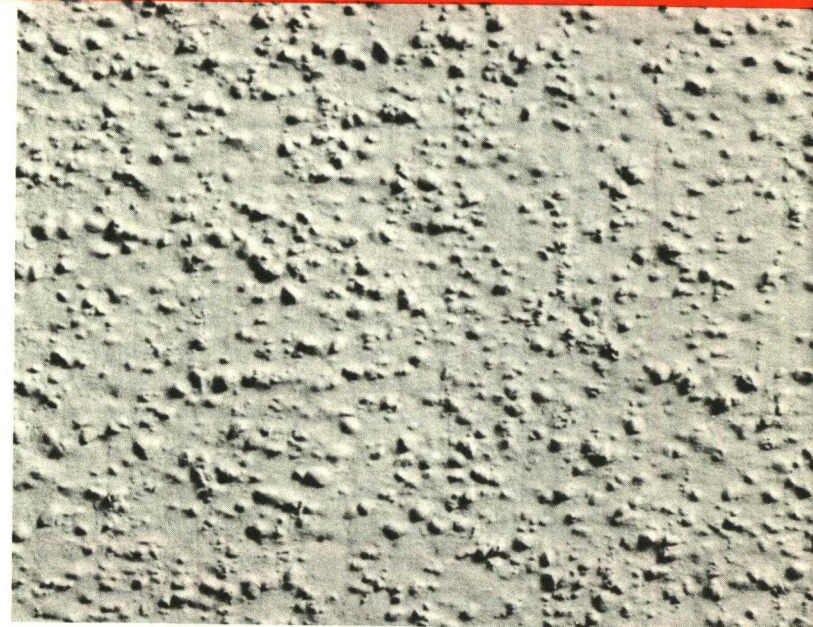
BEVELING can be performed on shaper or planer at cutting speed of about 100 fpm and coarse feeds of about .020". Impact-resistant carbide tools and heavy cutting oil are recommended.

PUNCHING should be done from smooth side of plate with standard punch and die clearance.

COUNTERSINKING can be executed on abrasive side with carbide-tipped masonry drill ground to 82° angle. Slow speed, moderately heavy feeds and heavy cutting oil are recommended. Countersinking should be done before drilling.

DRILLING should be performed from smooth side using slow speeds, heavy feeds and heavy cutting oil. If plate is countersunk, it can be drilled from abrasive side using practices normal for 3003 plate.

FORMING with abrasive on inside of bend is practical over minimum $\frac{3}{16}$ " R. With abrasive on outside of bend, minimum 2" R is required for cold bending, minimum $\frac{5}{8}$ " R for hot bending (900° F).



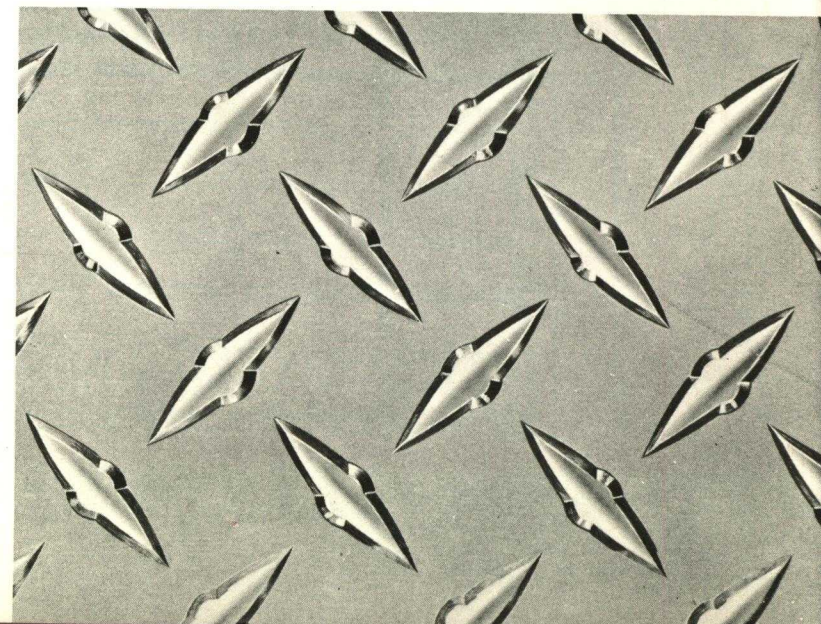
C-102 Tread Plate

MILL FINISH; ALLOY 6061-T6

- This tread plate has long been an industry favorite for such locations as engine room floors, ramps, catwalks and stairs. The nonsparking characteristic of aluminum is an added safety factor in areas where combustibles are present.
- It is also being employed as panel inserts in curtain wall construction where it provides an attractive surface pattern.
- Raised diamond at 45° angle to length of sheet; smooth reverse side.

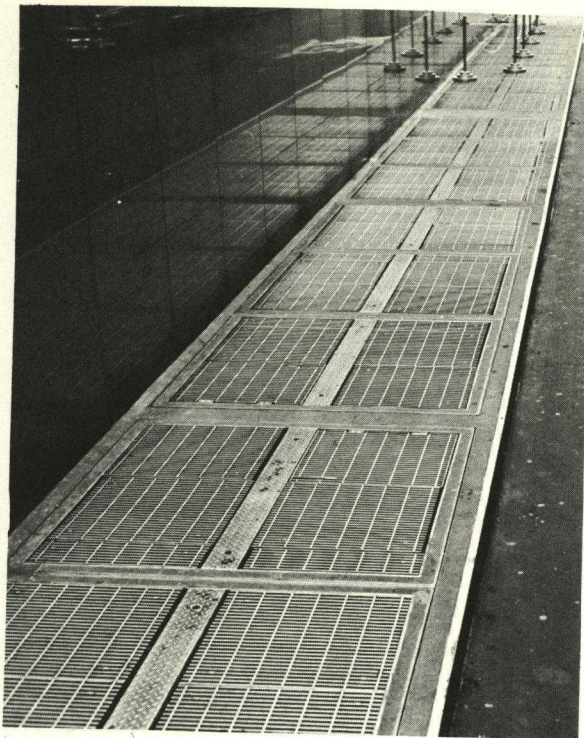
DIMENSIONS—INCHES	
THICKNESS ^②	SIZE
.250	48 x 192; 60 x 192
.188	48 x 192; 60 x 192
.156	48 x 192; 60 x 192
.125	48 x 192; 60 x 192
.100	48 x 192

^②Excludes raised figures





ALCOA ALUMINUM
vault frame sections

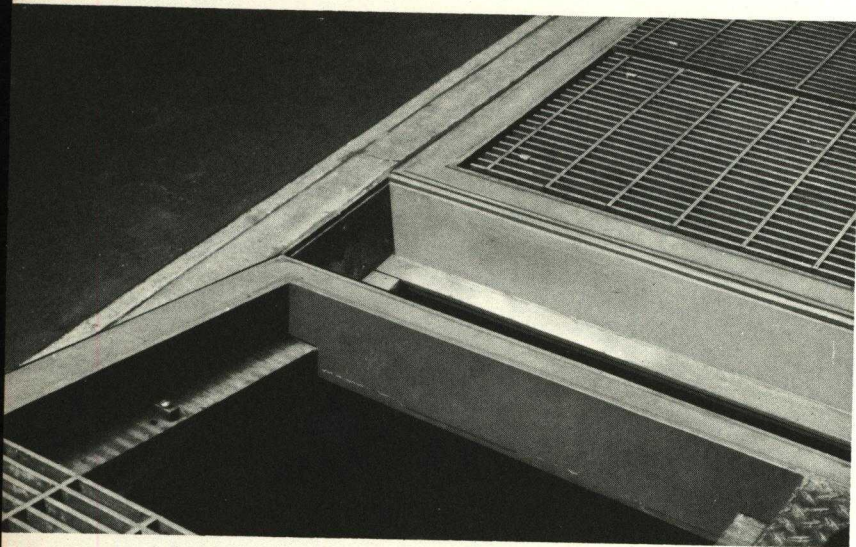


framing for sidewalk hatches made from Alcoa Aluminum Vault Frame Sections is widely used in openings to areaways, electrical transformer vaults and highway junction boxes.

The frame mating sections have been designed to close tolerances to eliminate penetration of surface water where necessary. Sides of the frames are tapered to prevent the cover or hatch from sticking during removal.

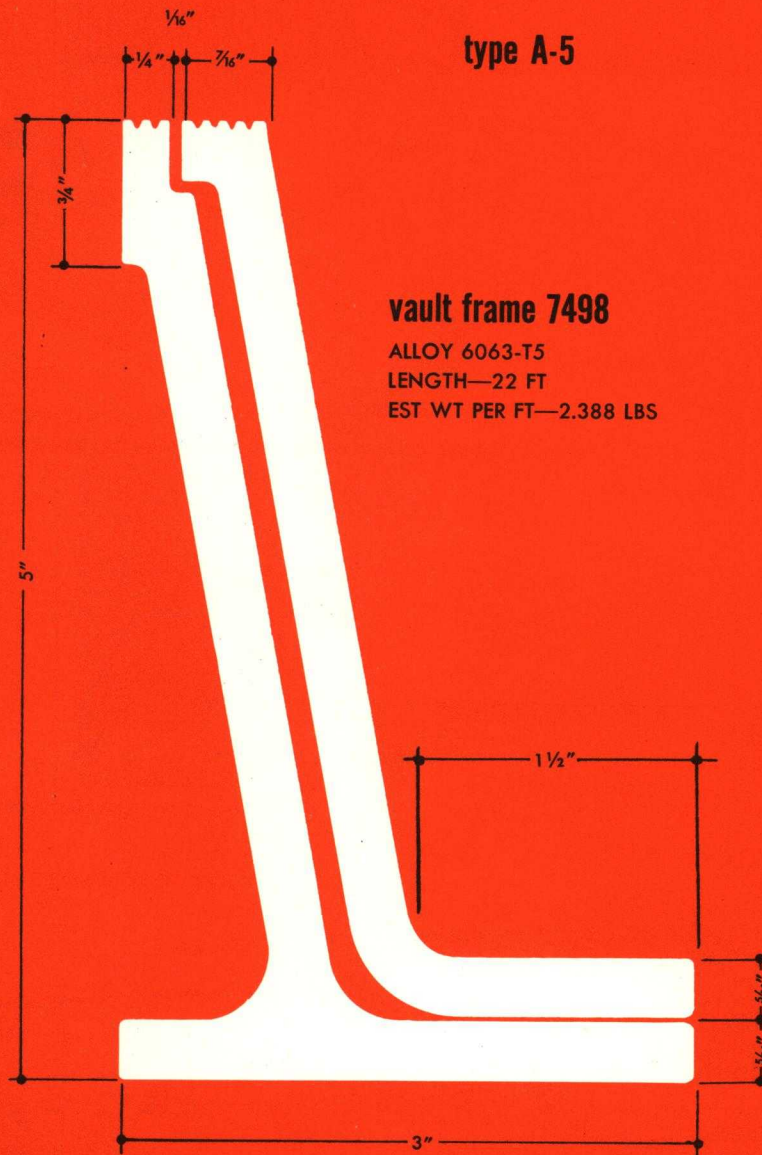
Because aluminum mating sections will not rust together, vault covers are easily removed, even after years of unmaintained exposure.

Aluminum vault frames cannot create sparks, an additional feature in vaults subject to the accumulation of explosive dust.



vault frame sections

type A-5



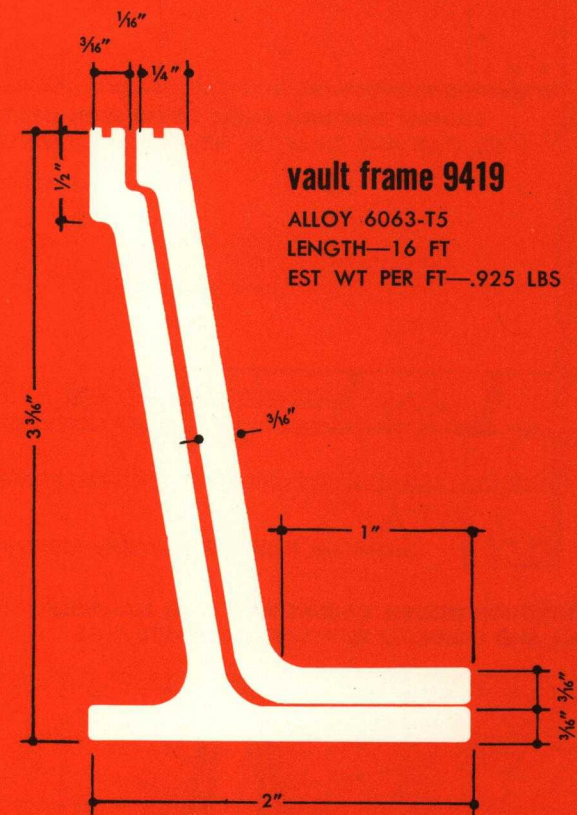
vault frame 7498

ALLOY 6063-T5
LENGTH—22 FT
EST WT PER FT—2.388 LBS

vault frame 7499

ALLOY 6063-T5
LENGTH—22 FT
EST WT PER FT—2.952 LBS

type A-3



vault frame 9419

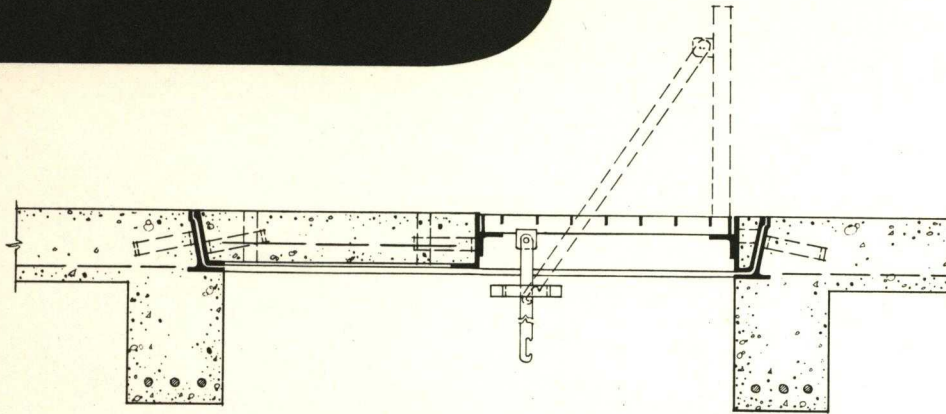
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.925 LBS

vault frame 9418

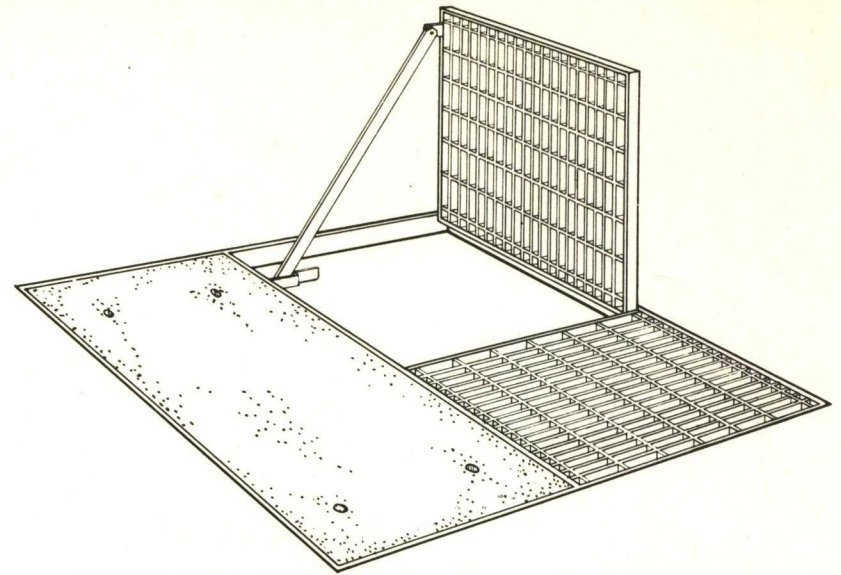
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—1.181 LBS

Extruded sections indicated in white are full size

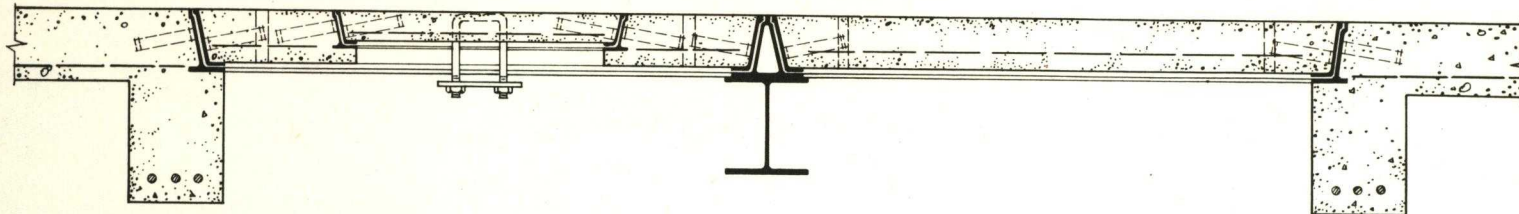
vault frame sections



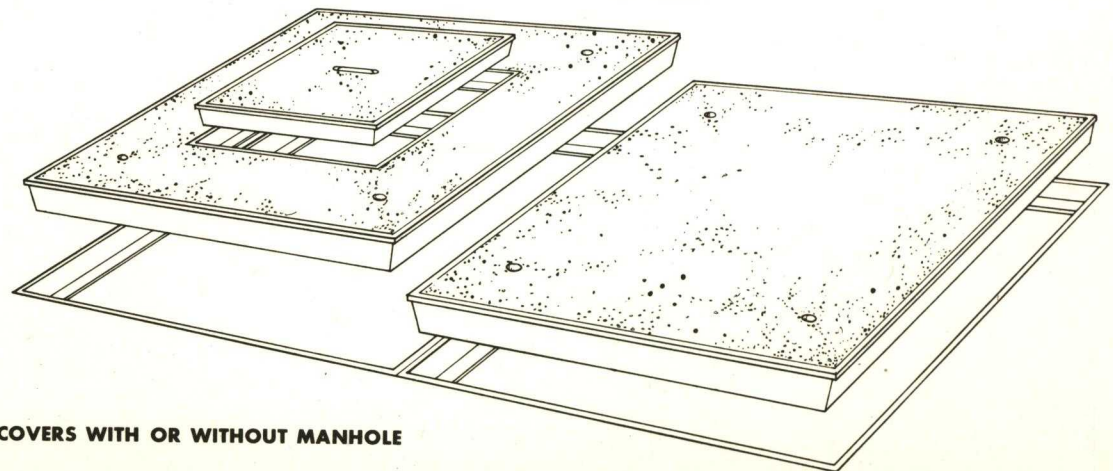
SECTION THROUGH VAULT COVER WITH GRATINGS
SEE PLAN AND ENLARGED SECTION ON OPPOSITE PAGE



SIDEWALK VAULT COVER WITH HINGED AND STATIONARY GRATING



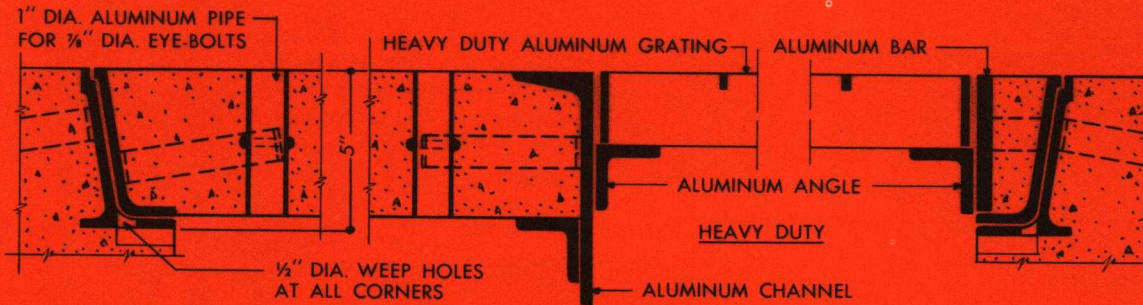
SECTION THROUGH DOUBLE VAULT COVER WITH MANHOLE
SEE PLAN AND ENLARGED SECTION ON OPPOSITE PAGE



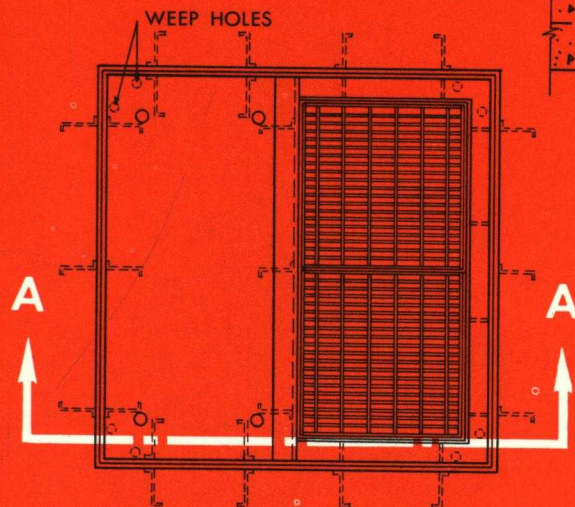
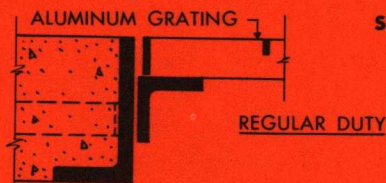
SINGLE OR DOUBLE SIDEWALK VAULT COVERS WITH OR WITHOUT MANHOLE

vault frame sections

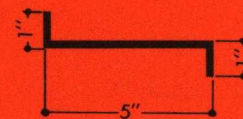
- NOTE:
- All metal parts should be Alcoa Aluminum for minimum maintenance.
 - Over-all dimensions of hatches to be determined by size of equipment.
 - Steel reinforcing for concrete to be determined by size of hatch.



SECTION A-A

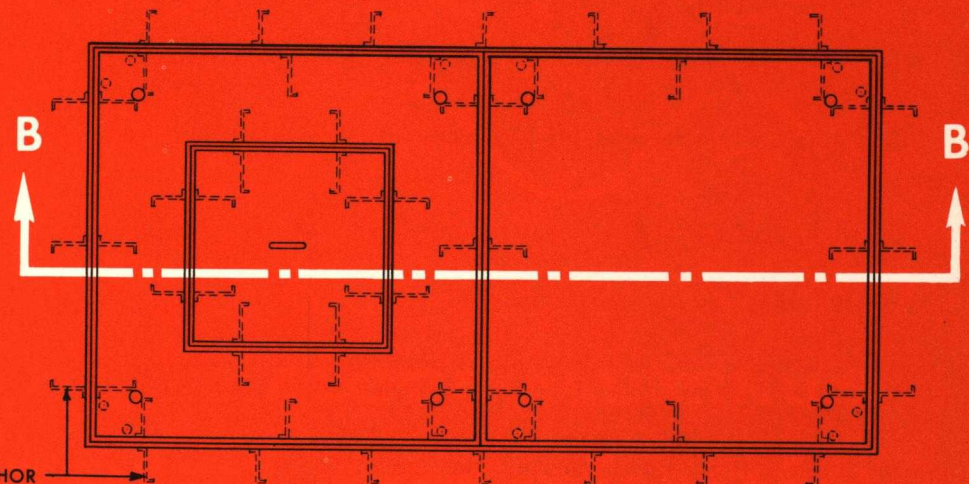


PLAN OF VAULT COVER WITH GRATINGS

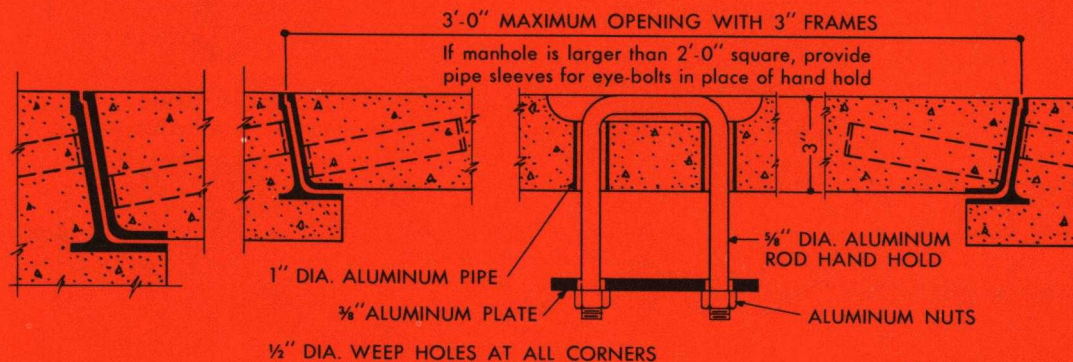


ALUMINUM ANCHOR
1" x 5/8" x 0'-7"

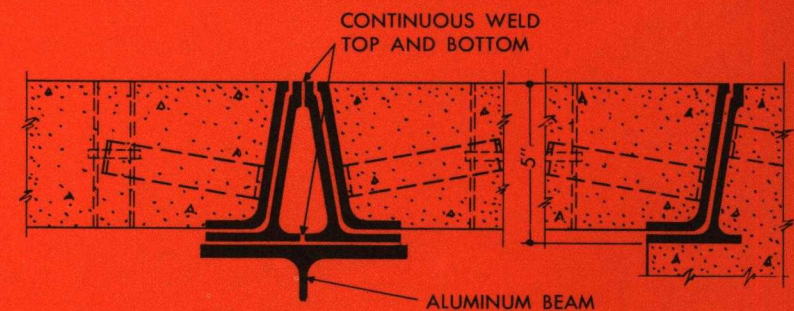
ALUMINUM ANCHOR



PLAN OF DOUBLE VAULT COVER WITH MANHOLE



SECTION B-B



1. GENERAL CONDITIONS: See "Suggested Long Form Specifications."

2. WORK INCLUDED:

- (a) Furnish labor, materials and equipment to complete all aluminum vault frame work indicated on drawings or specified herein.
- (b) (Alcoa Aluminum Vault Frame Type A-3) (Alcoa Aluminum Vault Frame Type A-5).
- (c) All parts and accessories, aluminum anchor straps and fasteners.
- (d) Shop drawings.

3. MATERIALS:

- (a) (Vault frame Type A-3—extruded, Alcoa alloy 6063-T5, section 9418 and 9419) (Vault frame Type A-5—extruded, Alcoa alloy 6063-T5 sections 7498 and 7499).
- (b) Structural framing **when required**—Alcoa alloy 6061-T6.
- (c) Aluminum grating **when required**—Alcoa Aluminum. Alloy, design, fabrication by..... **insert manufacturer selected.**
- (d) Anchor straps—formed sheet, Alcoa alloy 3003-H14, .125" thick, 1" wide.

- (e) Fasteners—screws, Alcoa alloy 2024-T4.
- (f) Pipe sleeve—Alcoa alloy 6063-T6, 1" diameter I.P.S.
- (g) Hand hold assembly; hand hold rod—Alcoa alloy 6061-T6, 5/8" diameter; plate—Alcoa alloy 6061-T6, 3/8" thick; nuts—Alcoa alloy 2024-T6.
- (h) Welding rod—Alcoa alloy as per Alcoa's *Welding Alcoa Aluminum*, latest edition.

4. FINISHES:

- (a) All surfaces—Mill Finish.

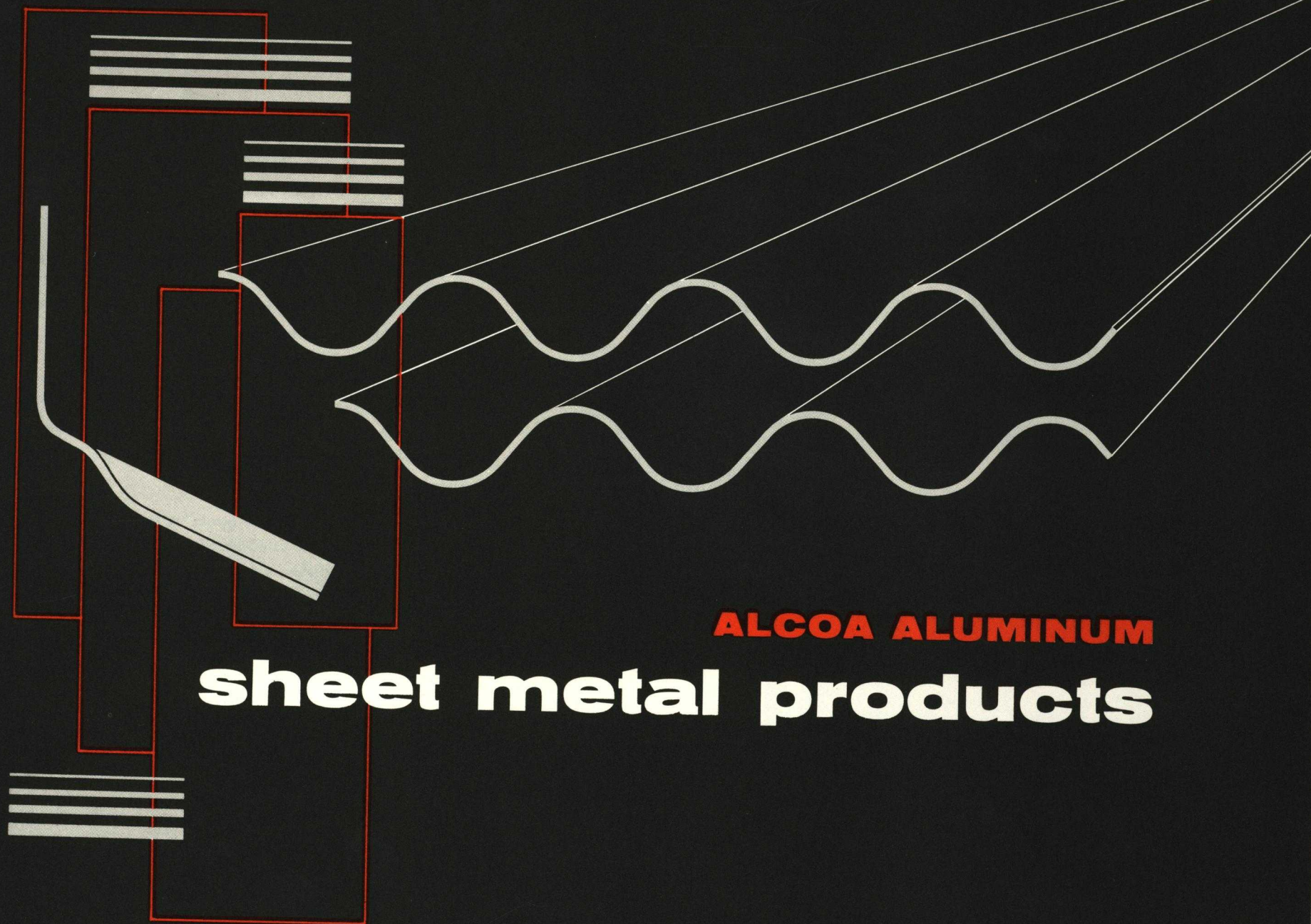
5. WORKMANSHIP, INSTALLATION:

- (a) Before starting work, verify governing dimensions at project site; examine adjoining work on which this work is in any way dependent for its required installation.
- (b) Vault frame assembly—fabricated and welded in shop. Welding— inert gas shielded metal arc welding method as per Alcoa's *Welding Alcoa Aluminum*, latest edition.
- (c) Anchor straps—not more than 1'-6" apart.
- (d) Set vault frame square and true.

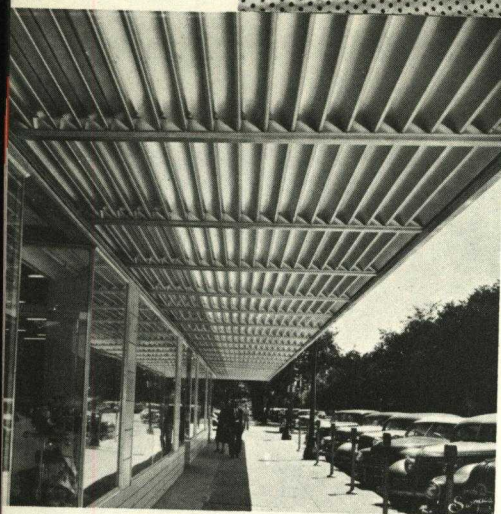
See "Suggested Long Form Specifications" to complete specification.

short form specification

Contractor shall furnish and install vault frame of Alcoa aluminum (Type A-3, sections 9418 and 9419) (Type A-5, sections 7498 and 7499) as indicated on drawings. Workmanship and installation shall be in accordance with recommended standards of Aluminum Company of America.



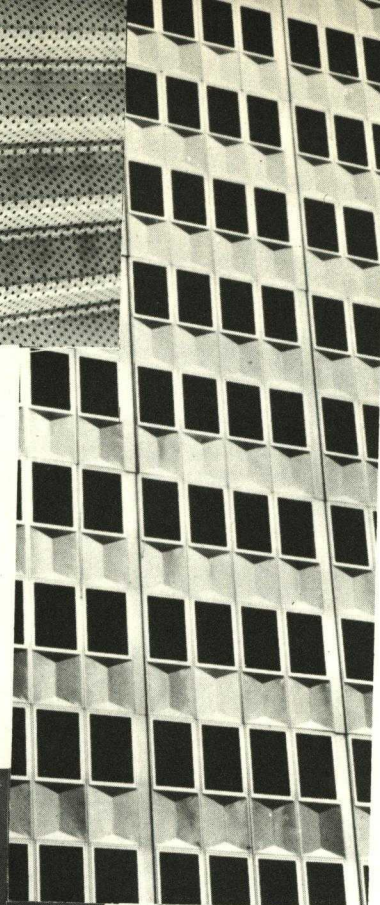
ALCOA ALUMINUM
sheet metal products



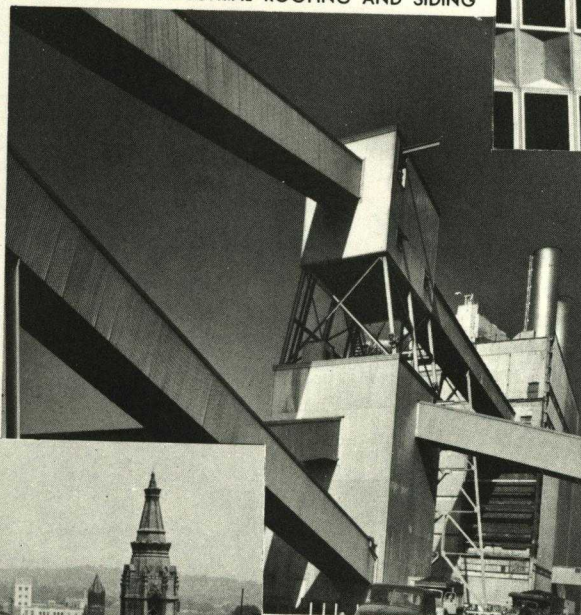
SOLAR SHADING

CORRUGATED INDUSTRIAL ROOFING AND SIDING

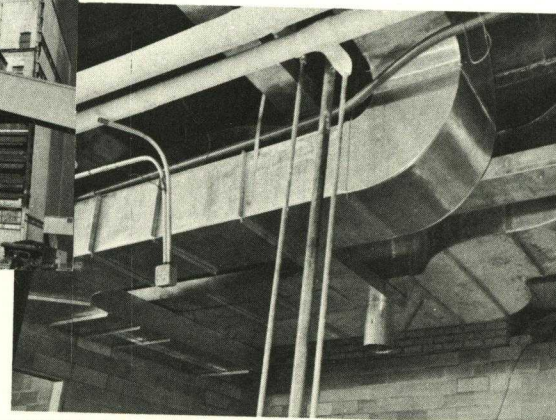
ACOUSTICAL
PANELING



CURTAIN WALL



ROOFING



HEATING AND VENTILATING

alcoa warehouses stock an unusually wide range of sizes, thicknesses, alloys and tempers in coiled and flat sheet and plate which will satisfy most architectural design needs. Also included are a number of special sheet products that enjoy many applications: Alumilite sheet for use where the exceptionally durable natural color Alumilite finish is desired; Anoclad sheet for application of the beautiful new Alcoa Architectural Color finishes; lighting sheet for illumination problems when either high or diffused reflectivity is required; and patterned sheet for surfaces where a decorative texture, diffused reflection or extra stiffness is wanted.

Corrugated roofing and siding, V-beam roofing and siding and ribbed siding along with a selection of fasteners, preformed flashing and flat flashing sheet provide a splendid selection of standard products for industrial building. Perforated corrugated sheet is also available for low cost acoustical installation on walls or ceilings.



comparative weights of sheet metals

Weights of all thicknesses and gages are determined on the basis of weights in pounds per sq ft per inch thick.

ALUMINUM ALLOY 3003	14.256 LBS
ALUMINUM ALLOY 5052	13.968 LBS
ALUMINUM ALLOY 6061	14.112 LBS
STEEL	41.82 LBS
COPPER	46.40 LBS

sheet

THICKNESS—INCHES		GAGE NO.		WEIGHT IN POUNDS PER SQ FT					THICKNESS—INCHES		GAGE NO.		WEIGHT IN POUNDS PER SQ FT				
STOCKED ALUMINUM THICKNESS	GAGE THICKNESS	MFG'R'S*	B & S†	ALUMINUM ALLOY			STEEL	COPPER	STOCKED ALUMINUM THICKNESS	GAGE THICKNESS	MFG'R'S*	B & S†	ALUMINUM ALLOY			STEEL	COPPER
				3003	5052	6061							3003	5052	6061		
1.000				14.26	13.97	14.11	41.82	46.40	.050	.0508		16	.713	.699	.706	2.13	2.36
.750				10.69	10.48	10.58	31.36	34.79		.0478	18		.681	.668	.675	2.00	2.22
.500				7.13	6.98	7.06	20.91	23.20		.0453		17	.646	.633	.639	1.89	2.10
.375				5.35	5.24	5.29	15.68	17.40		.0418	19		.596	.584	.590	1.75	1.94
.313				4.46	4.37	4.42	13.10	14.52	.040	.0403		18	.575	.563	.569	1.68	1.85
	.2893		1	4.12	4.04	4.08	12.10	13.39		.0359	20	19	.512	.501	.507	1.50	1.66
	.2576		2	3.68	3.60	3.63	10.77	11.93		.0329	21		.469	.460	.464	1.38	1.52
.250				3.56	3.50	3.53	10.46	11.59	.032	.0320		20	.456	.447	.452	1.34	1.48
	.2391	3		3.41	3.40	3.37	10.00	11.131		.0299	22		.426	.418	.422	1.25	1.39
	.2294		3	3.27	3.20	3.24	9.60	10.62		.0285		21	.406	.398	.402	1.18	1.32
	.2242	4		3.20	3.13	3.16	9.38	10.40	.027	.0269	23		.385	.376	.380	1.13	1.25
	.2092	5		2.98	2.92	2.95	8.75	9.71	.025	.0253		22	.356	.353	.357	1.05	1.17
	.2043		4	2.91	2.85	2.88	8.54	9.46		.0239	24		.341	.334	.337	1.00	1.11
	.1943	6		2.77	2.71	2.74	8.13	9.02		.0226		23	.322	.316	.319	.94	1.05
.190				2.71	2.65	2.68	7.87	8.72		.0209	25		.298	.292	.295	.87	.97
	.1819		5	2.59	2.54	2.57	7.60	8.42	.020	.0201		24	.287	.281	.284	.84	.93
	.1793	7		2.56	2.50	2.53	7.50	8.32		.0179	26	25	.255	.250	.253	.75	.83
	.1644	8		2.34	2.30	2.32	6.88	7.62		.0164	27		.234	.229	.232	.69	.76
	.1620		6	2.31	2.26	2.29	6.78	7.50	.016	.0159		26	.277	.222	.224	.66	.74
.160				2.28	2.24	2.26	6.52	7.23		.0149	28		.213	.208	.209	.62	.69
	.1495	9		2.13	2.09	2.11	6.25	6.94		.0142		27	.202	.198	.200	.59	.66
	.1443		7	2.06	2.02	2.04	6.04	6.68		.0135	29		.193	.189	.191	.56	.63
	.1345	10		1.92	1.88	1.90	5.63	6.24		.0126		28	.180	.176	.178	.53	.59
	.1285		8	1.83	1.80	1.81	5.38	5.95	.012	.0120	30		.171	.168	.169	.50	.56
.125				1.78	1.75	1.76	5.22	5.80		.0113		29	.161	.158	.159	.47	.52
	.1196	11		1.71	1.67	1.69	5.00	5.55		.0105	31		.150	.147	.148	.44	.49
	.1144		9	1.63	1.60	1.61	4.77	5.30	.010	.0100		30	.143	.140	.141	.42	.46
	.1046	12		1.49	1.46	1.47	4.38	4.84		.0097	32		.138	.136	.137	.41	.45
.100	.1019		10	1.42	1.40	1.41	4.26	4.73		.0090	33		.128	.126	.127	.38	.42
.090	.0907		11	1.28	1.26	1.27	3.79	4.20		.0089		31	.127	.124	.126	.37	.41
	.0897	13		1.28	1.25	1.27	3.75	4.15		.0082	34		.117	.115	.116	.34	.38
.080	.0808		12	1.15	1.13	1.14	3.38	3.75	.008	.0080		32	.114	.112	.113	.33	.37
	.0747	14		1.07	1.04	1.05	3.13	3.46		.0075	35		.107	.105	.106	.31	.35
	.0720		13	1.03	1.01	1.02	3.01	3.33		.0071		33	.101	.099	.100	.30	.33
	.0673	15		.96	.94	.95	2.81	3.12		.0067	36		.096	.094	.095	.28	.31
.063	.0641		14	.898	.880	.889	2.67	2.97		.0064	37		.091	.089	.090	.27	.30
	.0598	16		.853	.835	.844	2.50	2.77		.0063		34	.090	.088	.089	.26	.29
	.0571		15	.814	.798	.806	2.38	2.65	.006	.0060	38		.086	.084	.085	.25	.28
	.0538	17		.767	.751	.759	2.25	2.50									

*Manufacturers' Standard Gage for Steel Sheet

†Brown & Sharpe

Colored bars in columns indicate items stocked

DIMENSIONS—INCHES		MILL FINISH		MILL FINISH									
THICKNESS	SIZE	1100-O	1100-H14	3003-O	3003-H14	ALCLAD 2024-T3	5052-O	5052-H32	5052-H34	5052-H24	6061-O	6061-T4	6061-T6
.190	36 x 96												
	48 x 144												
	60 x 144												
	72 x 144												
.160	48 x 144												
.125	36 x 96												
	36 x 144												
	48 x 144												
	60 x 144												
.100	36 x 96												
	48 x 144												
.090	36 x 96												
	48 x 96												
	48 x 144												
.080	36 x 96												
	48 x 96												
	48 x 144												
	60 x 144												
.063	24 x 72												
	36 x 96												
	36 x 120												
	48 x 96												
	48 x 120												
	48 x 144												
	60 x 144												
.050	24 x 72												
	36 x 96												
	36 x 120												
	36 x 144												
	48 x 96												
	48 x 120												
	48 x 144												
	60 x 144												

① Temper-H24

② Temper-H22

flat

sheet

Colored bars in columns indicate items stocked

DIMENSIONS—INCHES		MILL FINISH		MILL FINISH									
THICKNESS	SIZE	1100-O	1100-H14	3003-O	3003-H14	ALCLAD 3003-H14	ALCLAD 2024-T3	5052-O	5052-H32	5052-H34	6061-O	6061-T4	6061-T6
.040	24 x 72												
	36 x 96												
	36 x 120												
	36 x 144												
	48 x 96												
	48 x 120												
	48 x 144												
	60 x 144												
.032	24 x 72												
	36 x 96												
	36 x 120												
	36 x 144												
	48 x 96												
	48 x 120												
	48 x 144												
.025	24 x 72												
	36 x 96												
	36 x 120												
	36 x 144												
.020	24 x 72												
	36 x 96												
	36 x 120												
	36 x 144												
.016	24 x 72												
	36 x 96												
.012	24 x 72												

sheet

coiled

Colored bars in columns indicate items stocked

DIMENSIONS—INCHES			FINISH AND ALLOY			
THICK- NESS	COIL WIDTH	INSIDE DIAMETER OF COIL	ONE SIDE BRIGHT MILL AND MILL 1100-O (300 & 600 lb coils)	MILL		
				3003-O (300 & 600 lb coils)	3003-H14 (600 lb coils)	ALCLAD 3003-H14 (600 lb coils)
.080	24	12 or 16				
.063	16, 24 24 24, 36, 48	12 or 16				
.050	18, 24 24 24, 36, 48	12 or 16				
.040	12, 16, 18, 24 24 12, 24, 36, 48	12 or 16				
.032	12, 16, 18, 24 24 24, 36, 48 14, 20	10 10 12 or 16 12 or 16				
.027	14, 20	12 or 16				

Other standard sizes available from warehouse stock

DIMENSIONS—INCHES			FINISH AND ALLOY			
THICK- NESS	COIL WIDTH	INSIDE DIAMETER OF COIL	ONE SIDE BRIGHT MILL AND MILL 1100-O (300 & 600 lb coils)	MILL		
				3003-O (300 & 600 lb coils)	3003-H14 (600 lb coils)	ALCLAD 3003-H14 (600 lb coils)
.025	12, 18, 24 24 24, 36, 48	10 10 12 or 16				
.020	12, 18, 24 24 24, 36 14, 20	10 10 12 or 16 12 or 16				
.016	12, 18 18 18, 36	10 10 12 or 16				
.012	12, 18 12 12	10 10 12 or 16				
.010	12 12	10 12 or 16				
.008	12	10				
.006	12	10				

rolled flashing

Alcoa Roll Valley

- Used for valley flashing and general sheet metal work
- Approved by F.H.A.

THICKNESS—.019 IN.

LENGTHS—50 FT

WIDTHS—14 IN.

20 IN.

28 IN.



DIMENSIONS—INCHES		ALLOYS—MILL FINISH				
THICKNESS	SIZE	1100-F	3003-F ^①	5052-F ^①	6061-O	6061-T6
1	36 x 96	—				—
.750	36 x 96	—				—
.500	36 x 96	—				—
.375	36 x 96 48 x 144	—				—
.313	36 x 96	—				
.250	36 x 96 48 x 144 60 x 144 72 x 144	— — —	— —	—	—	— — —
^① Available also in-H112						

plate

Alcoa Anoclad Flat Sheet Type 10 and Type 20

A quality sheet made from carefully controlled alloys specially processed for the application of Alcoa Architectural Colors. It is available with either a plain surface or with the Pattern No. 10.

- Anoclad Flat Sheet, Type 10 (interleaved)—For application of Alcoa Architectural Gray 2010, Blue 3110, Gold 4010 and Yellow 6010.
- Anoclad Flat Sheet, Type 20 (interleaved)—For application of Alcoa Architectural Gray 2020, Blue 3120, Brown 4020 and Yellow 6020.

THICKNESS INCH	SIZE INCHES	TEMPERS—TYPE 10, TYPE 20	
		MILL FINISH	PATTERN NO. 10
.125	48 x 144	-H12	-H134
.063	48 x 144	-H14	-H154

Anoclad Sheet

No. 32 Alumilite Flat Sheet

MILL FINISH; TEMPER -H14

A grade of sheet especially suited for a chemically treated surface followed by a Natural Color Alumilite finish. When so treated it produces a uniform appearance relatively free from structural streakage and has a substantially increased resistance to weathering. It is recommended for match with 6063-T5 extruded shapes finished in the same manner.

THICKNESS INCH	SIZE—INCHES				
	36 x 96	36 x 120	48 x 96	48 x 120	48 x 144
.125		— ^①			— ^①
.063		—			—
.050		—	—	—	—
.040		—	—	—	—
.032	—	—	—	—	—
^① Temper-H24					

Alumilite sheet

specular and diffused lighting sheet

A specialty item available in a highly reflective specular finish or in a diffused finish. Both finishes are protected by an Alumilite treatment to prevent dulling or discoloration. Alcoa Lighting Sheet is suited for use in lighting equipment or other applications where either high or diffused reflectivity is required.

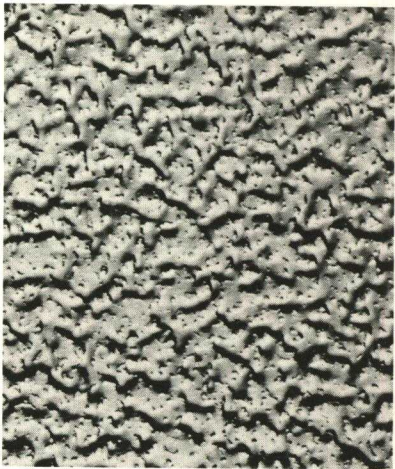
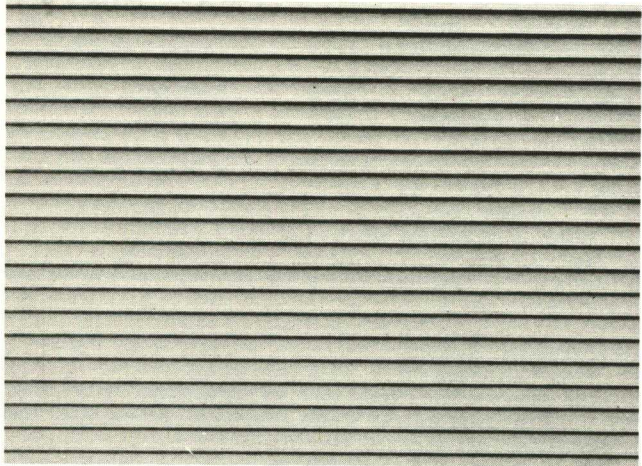
THICKNESS INCH	SIZE—INCHES	
	SPECULAR FINISH	DIFFUSED FINISH
.032	24 x 72	24 x 72
.025	24 x 72	24 x 72
.020	24 x 72	24 x 72

lighting sheet

patterned sheet

Alcoa Aluminum Patterned Sheets provide a rich source of surface texture for such architectural elements as doors, partitions and wall panels for commercial building and residential use. These roll-embossed patterns reduce reflection, increase sheet rigidity and minimize wear from the normal abrasion of daily use.

Although frequently used with their mill finish, patterned sheets offer the designer further decorative opportunities with application of frosted finishes, colored lacquers and paints. Alcoa Architectural Color Finishes may be applied to the Anoclad sheets which are stocked in Pattern No. 10.



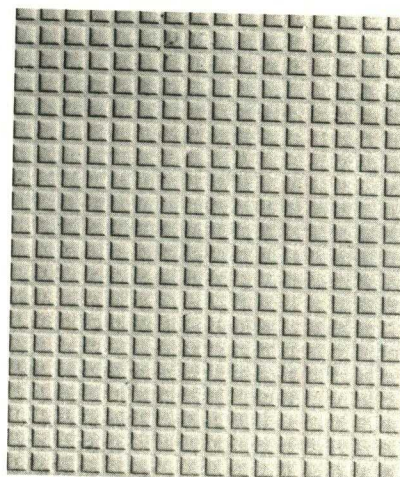
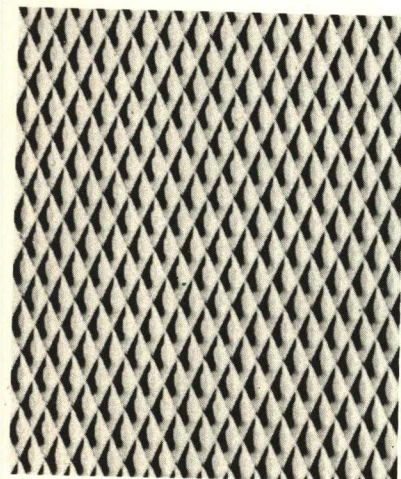
DIMENSIONS—INCHES

Pattern No. 10 (fluted) INTERLEAVED

Pattern No. E-5 (stucco)

THICKNESS	SIZE	ALLOY 3003-H114	ANOCCLAD TYPE 10	ANOCCLAD TYPE 20	ALLOY 3003-H114
.125	48 x 144		①	①	
.063	48 x 144		②	②	
.050	48 x 120 48 x 144				
.040	36 x 96 36 x 120 48 x 120 48 x 144				
.032	36 x 96 36 x 120 48 x 144				
.025	36 x 96 48 x 144				
.020	36 x 96				
			① Temper-H134	② Temper-H154	

patterned sheet



ALL PATTERNS: MILL FINISH

Pattern numbers prefixed with "E" are roll-embossed on both sides of the sheet with opposite impressions. Either side may be used for the exposed surface when installed.

Pattern No. E-13 (diamond)

Pattern No. E-14 (waffle)

Pattern No. E-15 (leather)

ALLOY 3003-H114

ALLOY 3003-H114

ALLOY 3003-H114

DIMENSIONS—INCHES

THICKNESS	SIZE
.125	48 x 144
.063	48 x 144
.050	48 x 120 48 x 144
.040	36 x 96 36 x 120 48 x 120 48 x 144
.032	36 x 96 36 x 120 48 x 144
.025	36 x 96 48 x 144
.020	36 x 96

industrial building products

Alcoa Corrugated Industrial Roofing Sheet

May be installed as roofing or siding

FINISHES: PLAIN MILL; PATTERN NO. E-5 (stucco)

35" width sheet

SHEET LENGTH FEET	LBS PER SHEET		SQUARE FEET PER SHEET	APPROX. NO. SHEETS PER SQ (100 SQ FT)
	.024" x 35"	.032" x 35"		
5	6.03	8.04	14.48	6.90
6	7.24	9.65	17.37	5.76
7	8.45	11.26	20.27	4.93
8	9.65	12.87	23.16	4.32
9	10.86	14.48	26.07	3.83
10	12.07	16.09	28.94	3.45
11	13.28	17.70	31.85	3.14
12	14.48	19.31	34.72	2.88

add 16% for side and end laps in estimating

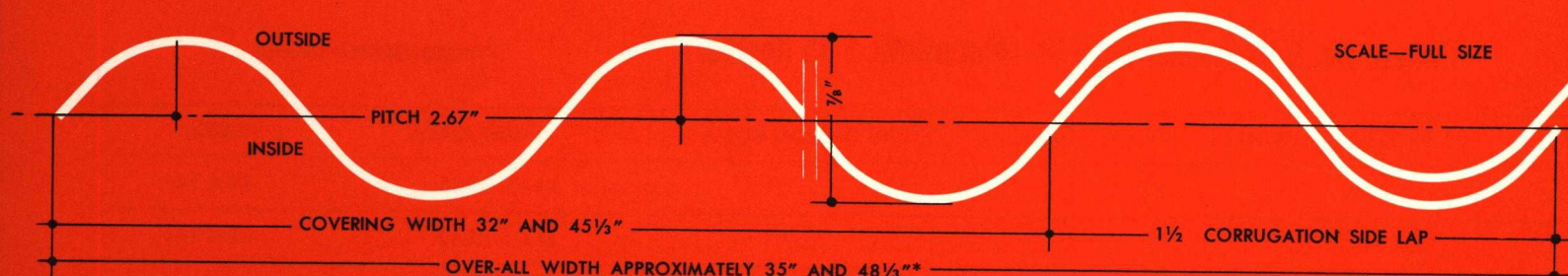
48 1/3" width sheet

SHEET LENGTH FEET	LBS PER SHEET		SQUARE FEET PER SHEET	APPROX. NO. SHEETS PER SQ (100 SQ FT)
	.024" x 48 1/3"	.032" x 48 1/3"		
5	8.27	11.03	20.14	4.97
6	9.93	13.24	24.17	4.13
7	11.58	15.44	28.20	3.55
8	13.24	17.65	32.22	3.10
9	14.90	19.86	36.25	2.76
10	16.55	22.06	40.28	2.48
11	18.20	24.27	44.30	2.26
12	19.85	26.47	48.33	2.07

when used for roofing allow 13% for side and end laps; when used for siding allow 9% for side and end laps

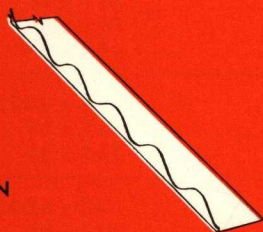
loading table

PURLIN SPACING	MAXIMUM SAFE LOAD POUNDS PER SQ FT	
	.024" SHEET	.032" SHEET
7'6"	17	22
7'0"	20	25
6'6"	23	29
6'0"	27	35
5'6"	32	41
5'0"	39	50
4'6"	48	63
4'0"	60	80
3'6"	79	106



corrugated closure

Fits either side of Corrugated Industrial Sheet
 THICKNESS—.032"
 LENGTH—32" (12 corrugations)
 GIRTH—3"
 PACKING—45 PIECES PER CARTON
 WT PER CARTON—15 LBS

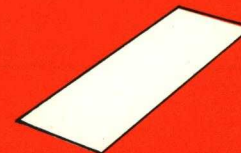


flat industrial flashing sheet

For field formed flashing

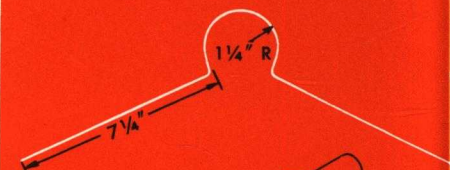
THICKNESS—.032"
 SIZES—36" x 96"; 48" x 120"
 FINISHES—PLAIN MILL; PATTERN NO. E-5

NOTE: This sheet can be formed economically on any standard hand brake.



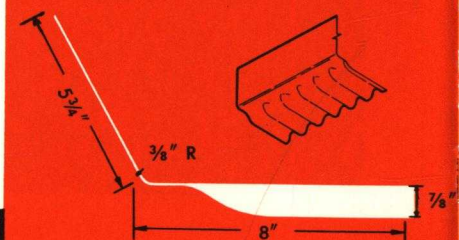
preformed flashing

THICKNESS—.032"
 FINISH—PLAIN MILL



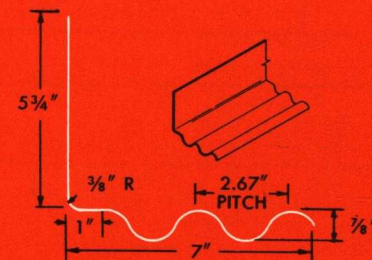
plain ridge roll

LENGTH—96"
 GIRTH—20 3/8"
 PACKING—15 PIECES PER CARTON
 WT PER CARTON—93 LBS



end wall flashing

LENGTH—42"
 GIRTH—13 3/4"
 PACKING—25 PIECES PER CARTON
 WT PER CARTON—45 LBS



side wall flashing

LENGTH—96"
 GIRTH—13 3/4"
 PACKING—15 PIECES PER CARTON
 WT PER CARTON—69 LBS

Alcoa Perforated Corrugated Sheet

THICKNESS—.024"

LENGTHS—5', 6', 7', 8', 9', 10', 11', 12'.

WIDTH—33 3/4" over-all (32" coverage with 1 corrugation sidelap).

CORRUGATION—7/8" deep; 2.67" crown to crown.

HOLES—.125" diameter on 2 1/4" staggered centers; approximately 14% of surface open.

FINISH—Pattern No. E-5 (stucco; diffuses reflection).

ACOUSTICAL AND DECORATIVE USE

Perforated corrugated sheet when used with sound-absorbing materials produces an exceptionally low-cost, noise-reducing wall. The holes in the aluminum admit and trap sound, the percentage of absorption depending upon the efficiency of the sound-absorbing material installed behind the paneling. For best results, acoustical materials made from mineral or vegetable fibers should be used with this sheet.

Aside from its value as an acoustical product, the attractive appearance of perforated corrugated sheet is finding uses for it as inexpensive decorative paneling, visual screens, room dividers, canopy soffits, etc. The application of color, either by anodic treatments or by paints

industrial building products

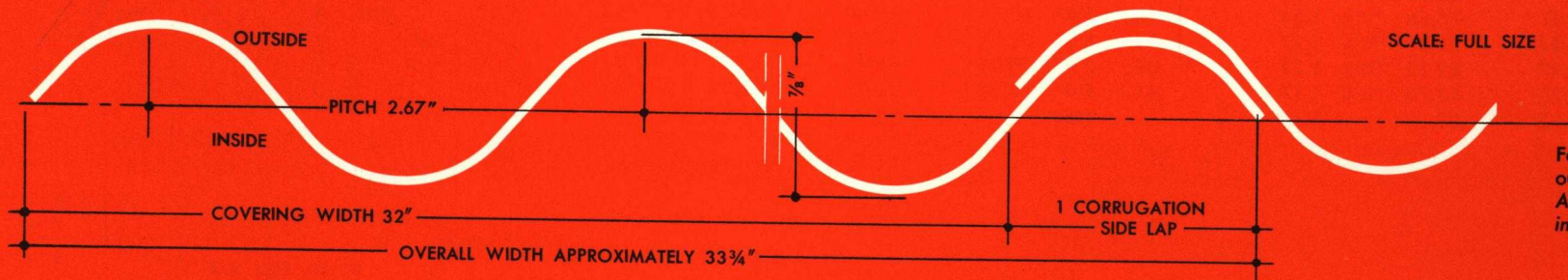
and lacquers, can provide a source of rich visual appeal in office reception rooms, game rooms, lobbies, theaters, restaurants.

WALL INSTALLATION

This sheet makes an excellent interior surface for an industrial sandwich wall which employs aluminum corrugated industrial sheet (see opposite page) for its exterior surface. These products, when used with an insulation such as glass fiber batts sandwiched between, can produce a 3"-thick wall with good acoustical control and high insulation value. Perforated corrugated sheet is well suited, too, as inside facing for masonry walls when sound reverberation is a nuisance, or when an unsightly surface needs covered.

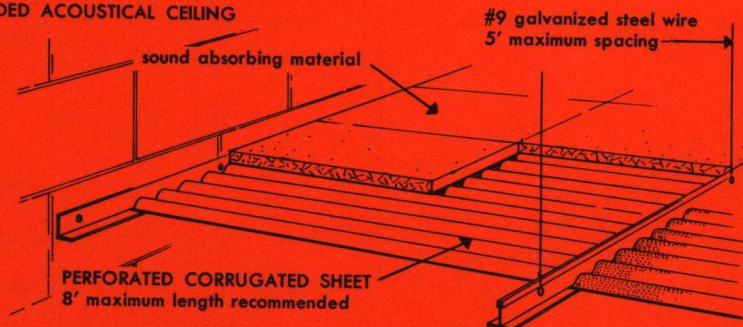
CEILING INSTALLATION

Perforated corrugated sheet may be used for utility and industrial acoustical ceilings where no special refinements are necessary, but where noise levels are high and sound reduction is desired. Its stucco-like finish reflects and diffuses light, improving over-all interior illumination. Accessory shapes are also stocked. (See details below.)

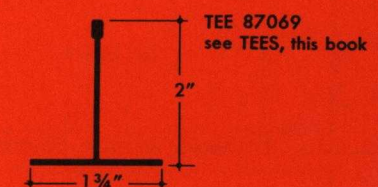
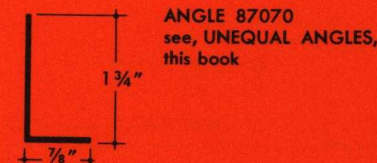


For detailed information on various kinds of building sheet, see *Alcoa Aluminum Industrial Building Products, 1957*.

TYPICAL SUSPENDED ACOUSTICAL CEILING



SUGGESTED CEILING ACCESSORIES



industrial building products

Alcoa V-Beam Roofing and Siding

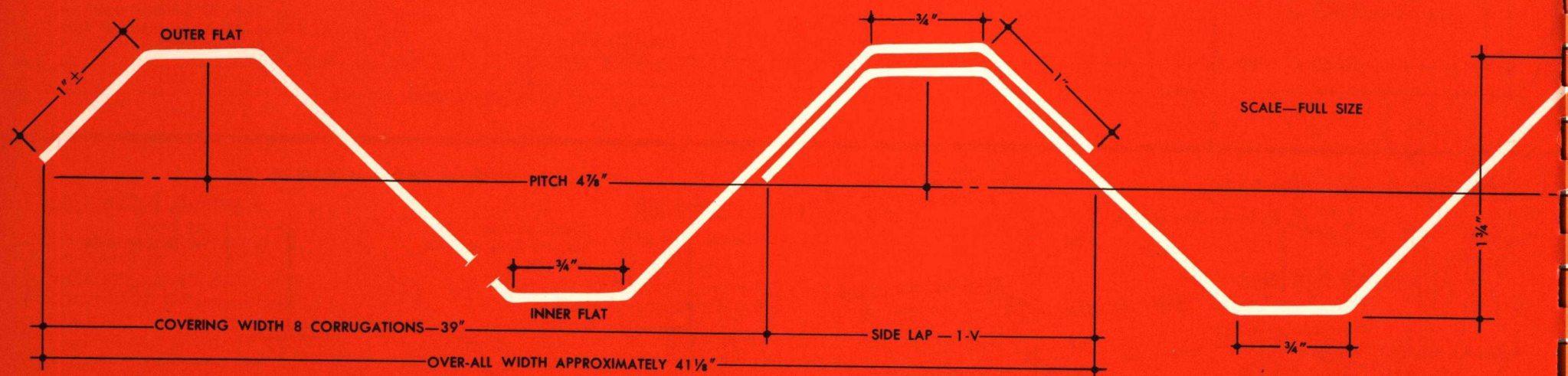
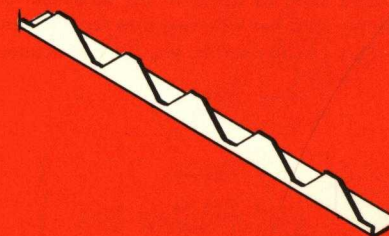
FINISH—PATTERN NO. E-5

SHEET LENGTH FEET	LBS PER SHEET		SQUARE FEET PER SHEET	APPROX. NO. SHEETS PER SQ (100 SQ FT)	SHEET LENGTH FEET	LBS PER SHEET		SQUARE FEET PER SHEET	APPROX. NO. SHEETS PER SQ (100 SQ FT)
	.040"x41 1/8"	.051"x41 1/8"				.040"x41 1/8"	.051"x41 1/8"		
5	12.66	16.14	17.13	5.84	27	68.36	87.15	92.61	1.08
6	15.19	19.36	20.56	4.86	28	70.90	90.38	96.04	1.04
7	17.72	22.59	23.99	4.17	29	73.42	93.61	99.47	1.01
8	20.25	25.82	27.42	3.65	30	75.96	96.84	102.90	.97
9	22.79	29.05	30.84	3.24					
10	25.32	32.27	34.27	2.92					
11	27.85	35.50	37.70	2.65					
12	20.38	38.73	41.13	2.43					
13	32.91	41.96	44.55	2.24					
14	35.45	45.19	47.98	2.08					
15	37.98	48.41	51.41	1.95					
16	40.51	51.64	54.83	1.82					
17	43.04	54.87	58.26	1.72					
18	45.57	58.10	61.69	1.62					
19	48.10	61.33	65.17	1.53					
20	50.64	64.56	68.60	1.46					
21	53.16	67.79	72.03	1.39					
22	55.70	71.01	75.46	1.33					
23	58.24	74.24	78.89	1.27					
24	60.76	77.47	82.32	1.22					
25	63.30	80.70	85.75	1.17					
26	65.82	83.93	89.18	1.12					

PURLIN OR GIRT SPACING	MAXIMUM SAFE LOAD, LBS PER SQ FT—.040" SHEET
10'6"	21
10'0"	23
9'6"	25
9'0"	28
8'9"	30
8'6"	32
8'0"	36
7'6"	41
7'0"	47
6'6"	55
6'0"	65
5'6"	78
5'0"	95
4'6"	118

V-beam closure

Fits either side of V-beam sheet
 THICKNESS—.040"
 LENGTH—39" (8 V-corrugations)
 GIRTH—4 1/16"
 PACKING—45 PIECES PER CARTON
 WT PER CARTON—27.3 LBS



Widths in 6" increments also available.

Alcoa Ribbed Industrial Siding

FINISH—PATTERN NO. E-5

This product is also available with an 8" pitch having 1½" inner flats and 5½" outer flats in same lengths, widths and thicknesses.

industrial building products

ribbed closure

Both outside and inside closure types available

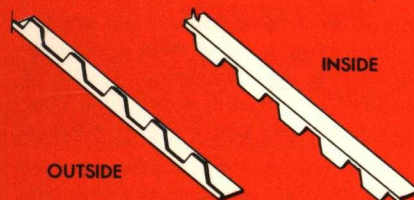
THICKNESS—.032"

LENGTH—40" (10 ribs)

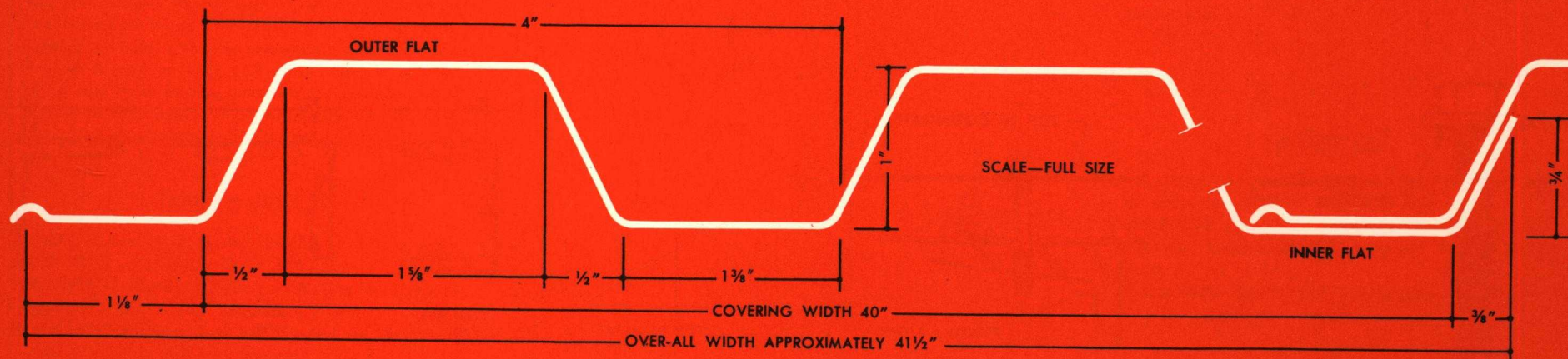
GIRTH—3½"

PACKING—45 PIECES PER CARTON

WT PER CARTON—19.9 LBS



SHEET LENGTH FEET	LBS PER SHEET		SQUARE FEET PER SHEET	APPROX. NO. SHEETS PER SQ (100 SQ FT)	SHEET LENGTH FEET	LBS PER SHEET		SQUARE FEET PER SHEET	APPROX. NO. SHEETS PER SQ (100 SQ FT)
	.032"x41½"	.040"x41½"				.032"x41½"	.040"x41½"		
5	9.97	12.46	17.29	5.78	26	51.86	64.81	89.91	1.11
6	11.97	14.96	20.75	4.82	27	53.86	67.31	93.37	1.07
7	13.96	17.45	24.21	4.13	28	55.84	69.80	96.82	1.03
8	15.96	19.95	27.67	3.61	29	57.84	72.30	100.28	1.00
9	17.95	22.44	31.13	3.21	30	59.84	74.79	103.74	.96
10	19.94	24.93	34.58	2.89	GIRT SPACING		MAXIMUM SAFE LOAD, LBS PER SQ FT—.032" SHEET		
11	21.94	27.43	38.04	2.63					
12	23.93	29.91	41.50	2.41	9'0" 8'6" 8'0" 7'6" 7'0" 6'6" 6'0" 5'6" 5'0" 4'6" 4'0" 3'6"		19 22 25 28 32 37 44 52 63 78 99 129		
13	25.93	32.41	44.96	2.22					
14	27.92	34.90	48.42	2.07					
15	29.92	37.40	51.88	1.93					
16	31.91	39.89	55.33	1.81					
17	33.91	42.39	58.79	1.70					
18	35.90	44.88	62.25	1.61					
19	37.88	47.36	65.70	1.52					
20	39.88	49.86	69.16	1.45					
21	41.88	52.35	72.62	1.38					
22	43.88	54.84	76.08	1.31					
23	45.87	57.34	79.53	1.26					
24	47.86	59.82	82.99	1.20					
25	49.85	62.32	86.45	1.16					



Widths in 6" increments also available.

industrial building products

weatherside fasteners

For installation from outside building

For information on other Weatherside Fasteners, see *Alcoa Aluminum Industrial Building Products, 1957*.

self-tapping screw

A screw which taps its own threads into structural steel supporting members after preliminary holes are drilled.

SIZES: No. 14 x 1" long and No. 14 x 1 3/4" long (for single sheeting); No. 14 x 3" long (for sandwich walls).

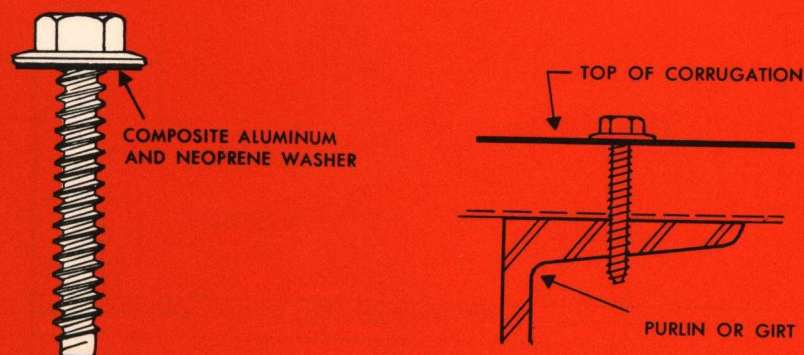
DESCRIPTION: Self-tapping screw with recessed hex head, type "B" made from stainless steel alloy type 305 with cadmium plate finish for lubrication; assembled with composite cupped aluminum and neoprene washer, the aluminum part having a minimum thickness .051" and minimum O.D. 5/8".

INSTALLATION: Sheet should be positioned against supporting steel and holes drilled through both sheet and purlin or girt flange as follows.

- For No. 14 to No. 10 gage steel—use No. 8 drill bit.
- For No. 10 gage to 3/16" steel—use No. 4 drill bit.
- For 3/16" or heavier steel—use No. 1 drill bit.

Screws are installed with power nut-runner, tapping threads as they enter and sealing hole in sheet with self-contained neoprene washer.

- For corrugated roofing—install screw in high corrugation only.
- For corrugated siding—install screw in high or low corrugation.
- For ribbed siding, V-beam roofing or siding—install screw in low corrugation only.



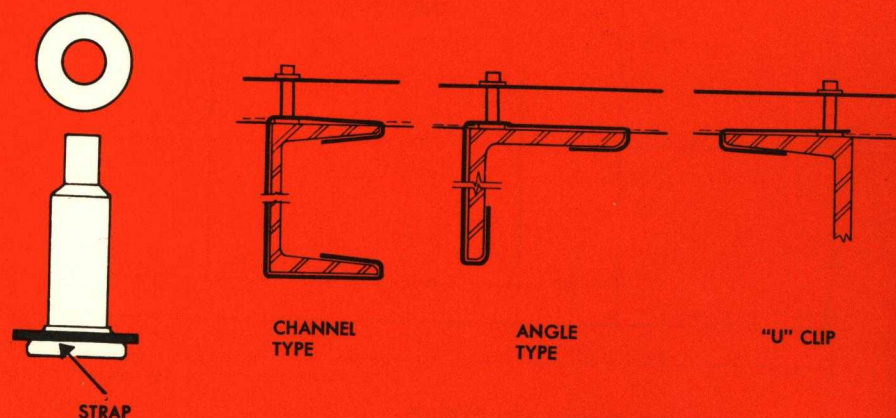
Widman Fastener

A step rivet strapped to the steel support. Sheet is impaled on stud and held tight by burr and flattened head of stud shank.

STRAP LENGTHS: • Channel type—4", 5", 6", 7", 8"
• Angle type—5", 7"
• "U" type—standard

DESCRIPTION: A composite aluminum step rivet and preformed aluminum strap fastener using an aluminum burr with a minimum O.D. 1/2" and a minimum thickness .051"

INSTALLATION: Base of the step rivet is placed on the steel purlin or girt and the strap is bent tightly around the flanges. The roofing or siding sheet is laid over the step rivet and impaled with a rubber hammer. An aluminum burr is applied to the shank of the rivet which is then headed or flattened, drawing the sheet tight. Rivets must penetrate the high corrugation only and are best suited to corrugated sheet.



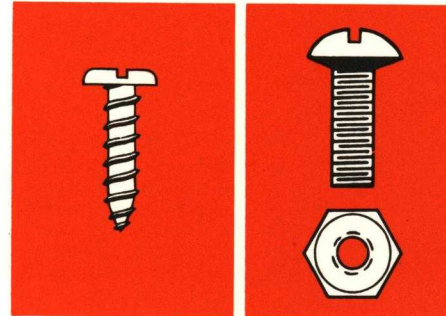
lap and flashing fasteners

sidelap, endlap and flashing screws

A sheet metal screw for holding sheet laps or flashing tight; recommended for use with weatherside fasteners.

DESCRIPTION: No. 12 x $\frac{3}{4}$ " aluminum sheet metal screw, slotted panhead type "A".

INSTALLATION: Holes should be drilled in sheet with No. 26 drill bit and screws are installed from outside the building.



special flashing fastener

A machine screw and nut for use where flashing joints are composed of several thicknesses of aluminum or where joint is subjected to high stress conditions not suited to the sheet metal screw.

SIZES: No. 12-24 x $\frac{5}{8}$ "; No. 12-24 x 1".

DESCRIPTION: Aluminum machine screw with slotted truss head and neoprene washer under head; aluminum hexagon nuts.

INSTALLATION: Holes should be drilled in sheet and screws installed from outside, nuts being applied from inside. Washer on screw seals hole.

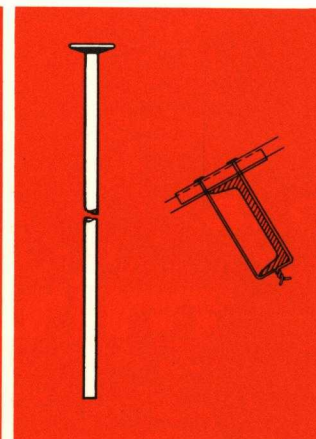
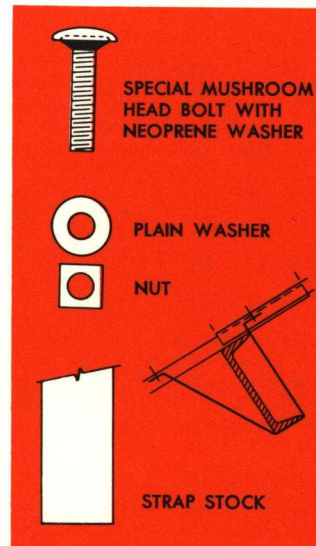
conventional fasteners

strap and bolt

An aluminum strap passes around steel support; the two ends of strap are bolted to corrugated sheet holding it tight against the steel.

DESCRIPTION: Special mushroom head bolt, $\frac{1}{4}$ "-20x $\frac{1}{8}$ " long, assembled with neoprene washer under head; and using a plain washer, $\frac{5}{8}$ " O.D. x $\frac{9}{32}$ " I.D. x .064" thick; and a nut, $\frac{1}{4}$ "-20 x $\frac{7}{16}$ " square x $\frac{1}{16}$ " thick. Straps preformed from strap stock $\frac{3}{4}$ " wide x .051" thick (available in 100' coils).

INSTALLATION: Straps should be preformed to fit girt or purlin and holes prepunched. Sheets are positioned and holes drilled through high corrugation. Each strap is placed from inside and bolts inserted from outside, sealing the holes with their neoprene washers. A plain washer is used on each bolt under sheet to prevent strap end from burring into corrugation. The nut is tightened from inside. These bolts may also be used for fastening sidelaps and endlaps.



double purlin nails

Long aluminum nails that penetrate the corrugated sheet and are bent around the steel support.

LENGTHS: 6", 7", 8", 9", 10", 11", 12".

DESCRIPTION: Aluminum purlin nails, .150" diameter assembled with neoprene washers under heads.

INSTALLATION: Purlin nails should be used in pairs. They are applied from outside through holes drilled or punched. Neoprene washers on purlin nails seal the holes. Placed on each side of purlin or girt, the nails are bent under bottom flange and twisted together from inside.

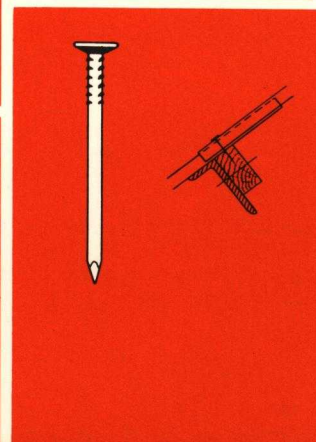
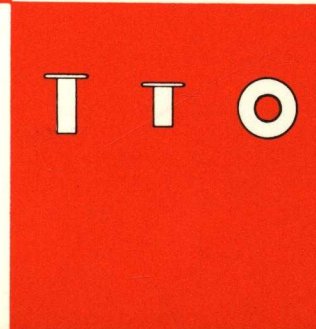
tinner's rivets

A rivet and burr available for miscellaneous metal work.

SIZES: $\frac{3}{8}$ " x .176" dia.; $\frac{1}{2}$ " x .176" dia.

DESCRIPTION: Aluminum tinner's rivet using an aluminum burr $\frac{1}{2}$ " O.D. x .185" I.D. x .051" thick.

INSTALLATION: Sheet can be impaled on rivet with rubber hammer and burr applied.



roofing nail

An aluminum nail for fastening corrugated sheet into wood nailing members.

DESCRIPTION: Aluminum roofing nail, $2\frac{1}{2}$ " long x .153" diameter, assembled with neoprene washer under head.

INSTALLATION: Roofing nail is hammered through sheet.

industrial building products—suggested specification insert

1. GENERAL CONDITIONS: See "Suggested Long Form Specifications."

2. WORK INCLUDED:

- Furnish (plant) (labor) (materials) (and) (equipment) for complete installation of all aluminum (roofing) (and) (siding) work indicated on drawings or specified herein.
- Alcoa Aluminum (roofing) (and) (siding).
- Alcoa Aluminum (preformed) (and) (field formed) flashing.
- Fasteners required for securing aluminum (roofing) (siding) (flashings) (and) (miscellaneous sheet metalwork).
- Calking.
- Priming and back-painting of aluminum (roofing) (siding) (and) (flashings).
- Shop drawings.
- Storage of materials.

3. MATERIALS:

- Roofing shall be:
 - Alcoa Corrugated Industrial Roofing Sheet, 2.67" pitch x $\frac{7}{8}$ " depth x (35") (48 $\frac{1}{2}$ ") width, (plain mill) (No. E-5 Pattern, stucco) finish, (.032") (.024") thick, in lengths shown on drawings.)
 - Alcoa V-Beam Roofing Sheet, 4 $\frac{7}{8}$ " pitch x 1 $\frac{3}{4}$ " depth x 41 $\frac{1}{8}$ " width, No. E-5 Pattern stucco finish, (.040") (.051") thick, in lengths shown on drawings.)
- Siding shall be:
 - Alcoa Ribbed Industrial Siding Sheet, 4" pitch x 1" depth x 41 $\frac{1}{2}$ " width, No. E-5 Pattern, stucco finish, (.032") (.040") thick, in lengths shown on drawings.)
 - Alcoa Ribbed Industrial Siding Sheet, 8" pitch x 1" depth x 41 $\frac{1}{2}$ " width, No. E-5 Pattern, stucco finish, (.032") (.040") thick, in lengths shown on drawings.)
 - Alcoa V-Beam Siding Sheet, 4 $\frac{7}{8}$ " pitch x 1 $\frac{3}{4}$ " depth x 41 $\frac{1}{8}$ " width, No. E-5 Pattern stucco finish, (.040") (.051") thick, in lengths shown on drawings.)
 - Alcoa Aluminum Perforated Corrugated Sheet, 2.67" pitch x $\frac{7}{8}$ " depth x 33 $\frac{3}{4}$ " width, No. E-5 Pattern, stucco finish, .024" thick, in lengths shown on drawings. *For interior use only.*

Note: Alcoa Corrugated Industrial Roofing may also be used as siding.

- Flat Industrial Flashing Sheet for forming field formed flashings shall be (plain mill finish) (No. E-5 Pattern, stucco finish), (36" x 96") (48" x 120"), x (.032") (.040") thick.
- Closures shall be (aluminum) (rubber).
- Preformed aluminum sheet flashings shall be (side wall flashings .032" thick x 96" long) (end wall flashing .032" thick x 42" long) (plain ridge roll .032" thick x 96" long). *For Corrugated Industrial Roofing Sheet only.*
- Fasteners for securing aluminum (roofing) (and) (siding) to the structural supports shall be:
 - (Self-tapping screws, No. 14 x (1 $\frac{3}{4}$ " long) *for Corrugated Industrial Roofing and Siding*, (1" long) *for Corrugated Industrial Siding, V-Beam Roofing and Siding and Ribbed Industrial Siding* with a recessed hex head type "B" made from stainless steel alloy type 305 with a cadmium plate finish. The screw shall have under the hex head a composite cupped aluminum and neoprene washer with the aluminum portion having a minimum thickness .051" and a minimum OD $\frac{3}{4}$ ".)
 - (Widman aluminum composite step rivet and preformed strap fastener with special size strap for each size supporting member and aluminum burr, minimum $\frac{1}{2}$ " OD x .051" thick, to be applied before heading rivet.) *For Corrugated Industrial Roofing and Siding Sheet only.*
 - (Composite aluminum and steel weldable studs and aluminum burrs with a minimum $\frac{1}{2}$ " OD and .051" thickness to be applied before heading rivet. Aluminum rivet projection shall be $\frac{3}{8}$ " long before heading.) *For Corrugated Industrial Roofing and Siding Sheet only.*

short form specification

Contractor shall furnish and install (Alcoa Corrugated Industrial (Roofing) (and) (Siding) Sheet) (Alcoa Perforated Corrugated Sheet), (Alcoa Ribbed Industrial Siding Sheet), (Alcoa V-Beam (Roofing) (and) (Siding) Sheet), as indicated on drawings. Workmanship and installation shall be in accordance with recommended standards of Aluminum Company of America.

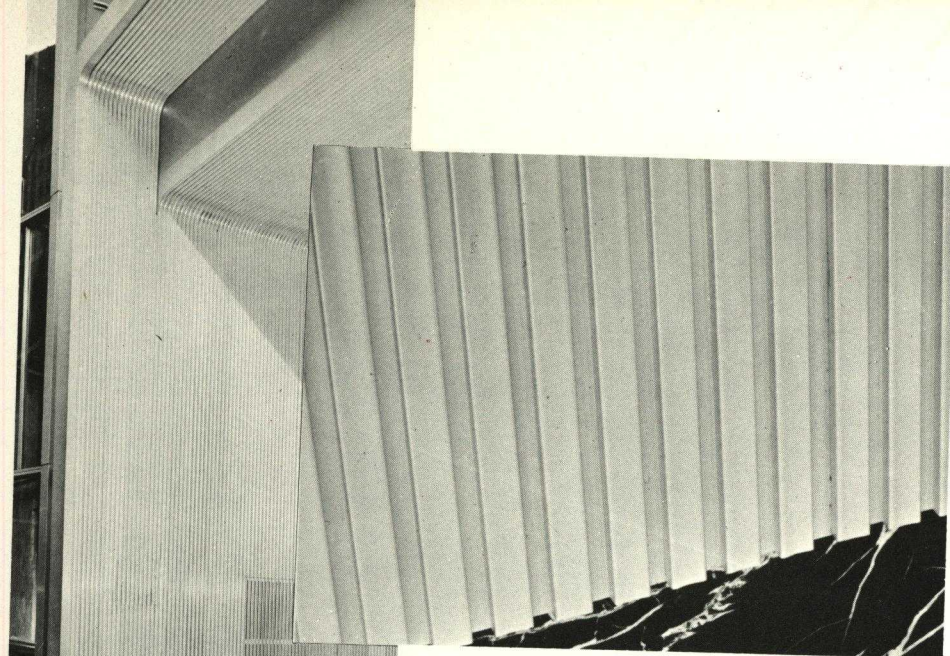
- (Aluminum straps and bolts, straps to be preformed from stock .051" thick x $\frac{3}{4}$ " wide using special aluminum mushroom head bolt $\frac{1}{4}$ "-20 x 1 $\frac{1}{8}$ " long with neoprene washer and with plain aluminum washer $\frac{3}{8}$ " OD x $\frac{1}{2}$ " ID x .064" thick to be used between strap and square nut $\frac{1}{4}$ "-20 x $\frac{7}{16}$ " x $\frac{3}{16}$ " thick.) *For Corrugated Industrial Roofing and Siding Sheet only.*
- (Double purlin nails using two aluminum purlin nails .150" diameter with neoprene washer under heads and of proper length to fit various purlins.) *For Corrugated Industrial Roofing and Siding Sheet only.*
- Fasteners for securing (sidelaps and endlaps) on (roofing) (and) (siding) (and) (flashing) to (roofing) (and) (siding) shall be No. 12 x $\frac{3}{4}$ " long slotted panhead type "A" Alcoa Aluminum sheet metal screws.
- Calking compound. *Insert calking selected.*
- Paint or compound for back-painting. *Insert material selected.*

4. WORKMANSHIP, INSTALLATION:

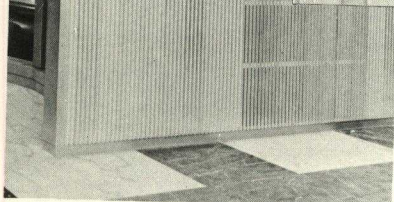
- Before starting work, verify governing dimensions at project site; examine adjoining work on which this work is in any way dependent for its required installation.
- Aluminum sheets shall be stored on end in a dry place to avoid condensation. Do not allow sheets to come in contact with materials that might cause staining of aluminum, such as mud, uncured concrete, cement, lime or other strong chemicals in the presence of moisture.
- (Corrugated roofing shall not be applied to slopes having a pitch less than 3" in 12".) (V-Beam roofing shall not be applied to slopes having a pitch less than 2" in 12".)
- (Endlaps shall be not less than (6" for roofing) (and) (4" for siding).) (Endlaps for V-Beam roofing on 2" in 12" slopes shall be 9".)
- Sidelaps shall be:
 - (Corrugated Industrial Roofing, a minimum of 1 $\frac{1}{2}$ corrugations.)
 - (Corrugated Industrial Siding, a minimum of 1 corrugation.)
 - (Ribbed Industrial Siding, a minimum of 1 rib corrugation.)
 - (V-Beam Roofing or Siding, a minimum of 1 V corrugation.)
- Maximum fastener spacing to structural supports for:
 - (Corrugated Industrial (Roofing) (and) (Siding) shall be 10 $\frac{3}{4}$ " or every fourth corrugation) (8" or every third corrugation *for high stress conditions*.)
 - (Ribbed Industrial Siding shall be 8" or every other rib.)
 - (V-Beam (Roofing) (and) (Siding) shall be 4 $\frac{3}{4}$ " or every rib at ends of sheet and 9 $\frac{3}{4}$ " or every other rib at intermediate supports.)
- Fasteners located at endlaps shall be placed not more than 2" from end of overlapping sheets. (Fasteners for Corrugated Industrial Roofing shall pierce only the high corrugation.) (Fasteners for Corrugated Industrial Siding may pierce either the high or low corrugation.) (Fasteners for ribbed Industrial Siding Sheet shall pierce only the valley or low corrugation.) (Fasteners for V-Beam (Roofing) (and) (Siding) shall pierce only the valley or low corrugation.)
- Maximum sheet metal screw fastener spacing on sidelaps shall be 12". Maximum sheet metal screw fastener spacing on endlaps shall be:
 - (For corrugated Industrial (Roofing) (and) (Siding)—(10 $\frac{3}{4}$ " *for normal conditions*) (8" *for high stress conditions*.)
 - (For ribbed Industrial Siding Sheet—as required.)
 - (For V-Beam (Roofing) (and) (Siding)—as required.)
- No. 12 sheet metal screws for endlaps and sidelaps shall be driven into holes drilled with a No. 26 drill bit.
- Flashings, where field formed from Flat Industrial Flashing Sheet, shall have minimum bend radii of $\frac{1}{16}$ ".
- Tinner's rivets shall employ the use of an aluminum burr $\frac{1}{2}$ " OD x .051" thick before heading. *For Corrugated Industrial Roofing and Siding Sheet only.*
- "Z" clips shall be used only as supplementary fasteners. *For Corrugated Industrial Roofing and Siding Sheet only.*
- Purlin nails shall not be used single but in double combination. *For Corrugated Industrial Roofing and Siding Sheet only.*



ALCOA ALUMINUM
trim—molding

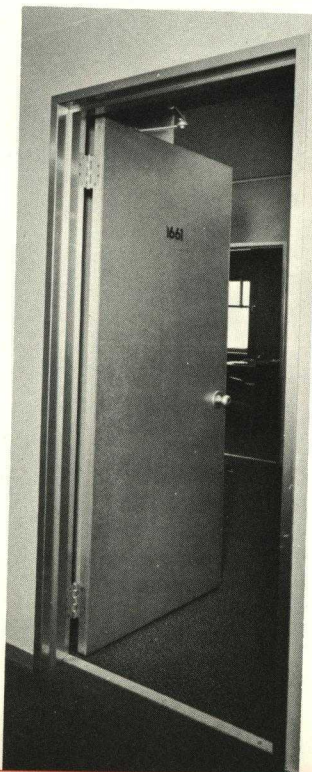


FASCIA

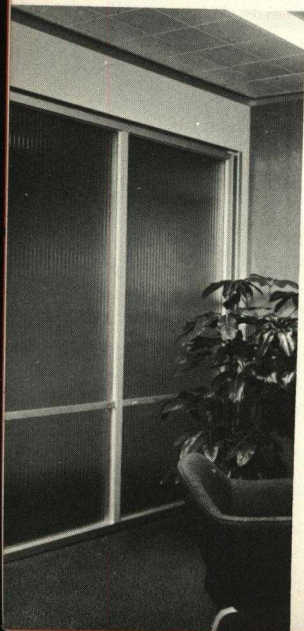


MAIL CHUTE

DOOR JAMBS AND BASE MOLD



PARTITION



the trim and molding shapes shown here are those most commonly used to meet the requirements of architects and ornamental metal fabricators in creating a variety of designs for many applications. Attention is invited to the line of modern snap-on moldings—all finding wide acceptance in new and remodeled buildings.

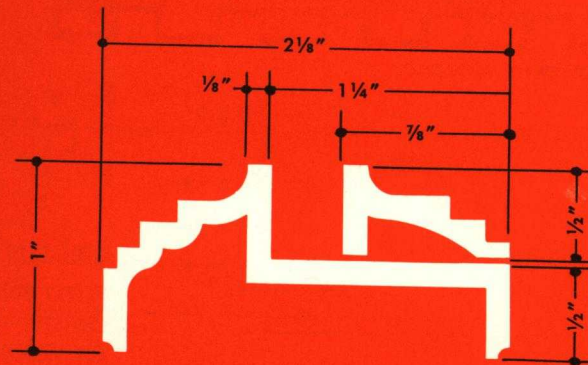
Of particular interest, too, is the fascia system which includes a facing section, terminal elements and concealed anchorage. The soft highlights and shading of the slightly concave facing ribs produce a surface of great beauty and dignity. Although intended primarily for interior walls, the system has also been employed most successfully on canopy soffits.

The appearance of aluminum trim and molding is always improved by an Alumilite finish. Your Alcoa representative can help you specify the treatment most appropriate for a given application.



Best suited to interior glazing

glazing members

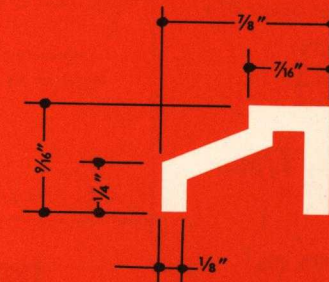
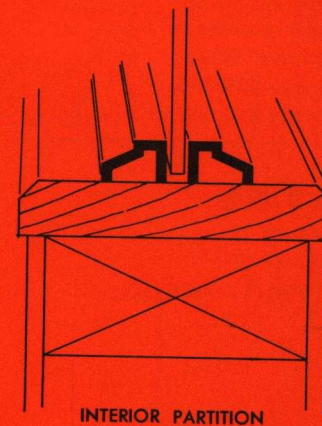


glass stop 5390

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.528 LBS

glass stop 5391

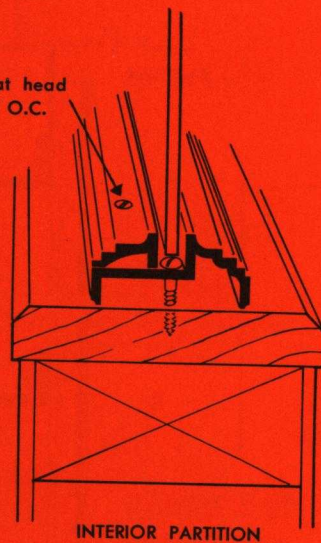
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.209 LBS



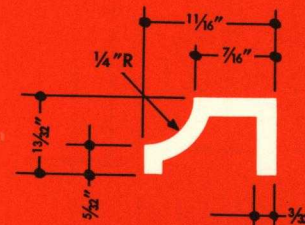
glass stop 4308

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.248 LBS

6-32 x 3/8" long flat head
machine screw, 12" O.C.

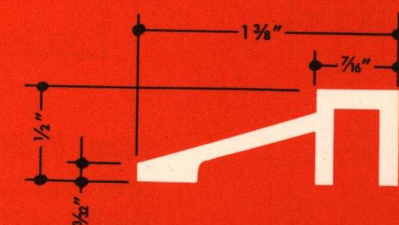


For other suitable glass stop
shapes, see CHANNELS, this book.



glass stop 6474

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.135 LBS



glass stop 12919

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.274 LBS

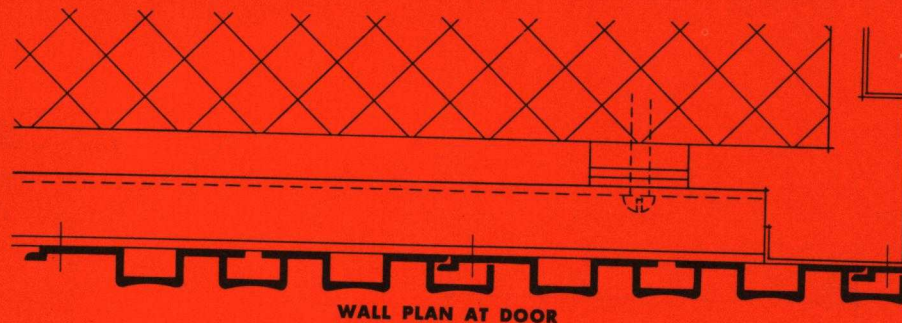
Extruded sections indicated in white are full size

fascia system

With concealed fastening



END STOP DETAIL

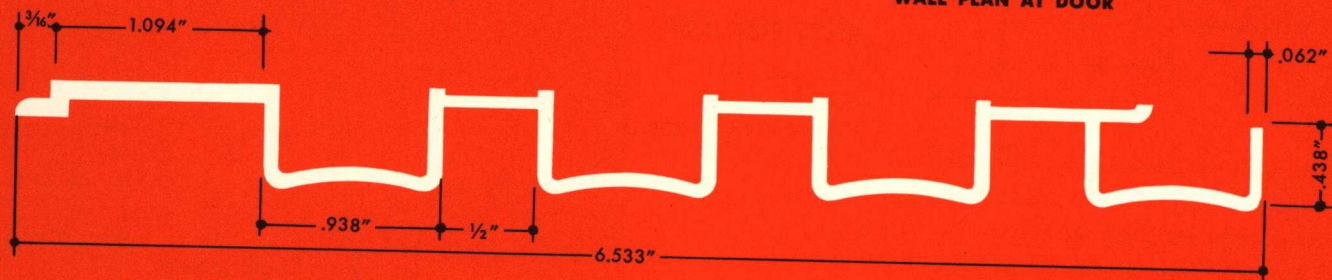


WALL PLAN AT DOOR



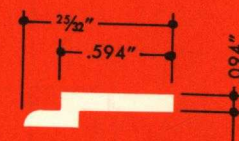
end stop anchor 77563

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.098 LBS



fascia 87066

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.820 LBS



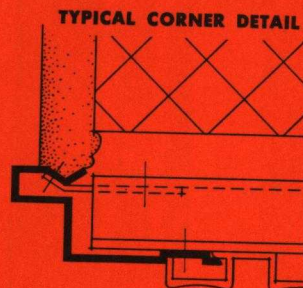
end starter 58219

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.096 LBS



end stop 77564

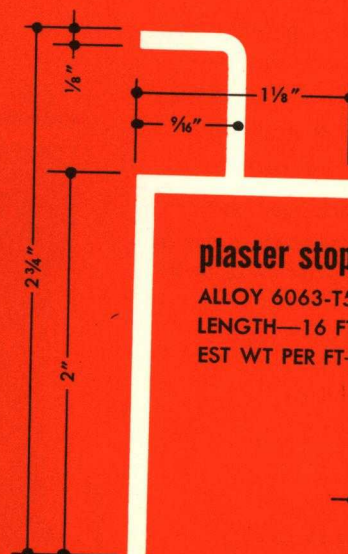
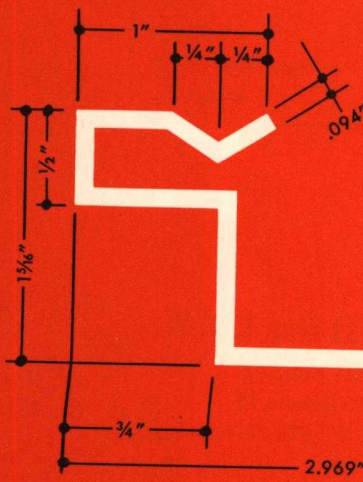
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.108 LBS



TYPICAL CORNER DETAIL

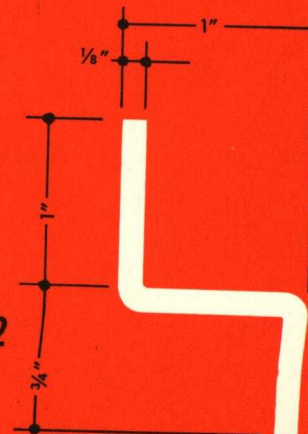
corner 58391

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.604 LBS



plaster stop 58221

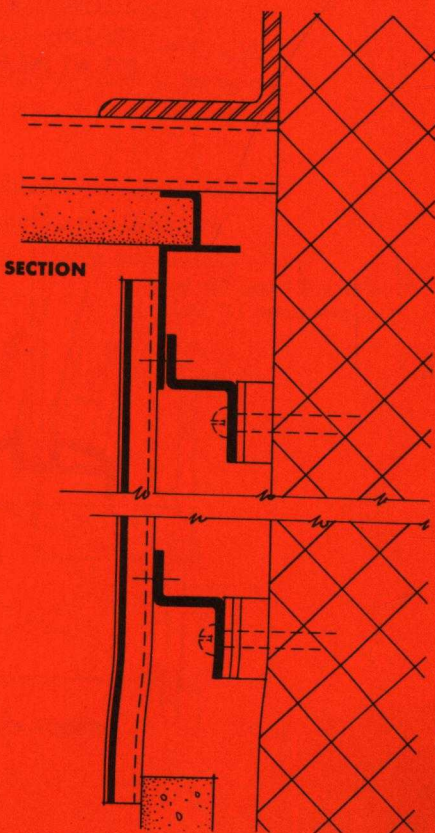
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.624 LBS

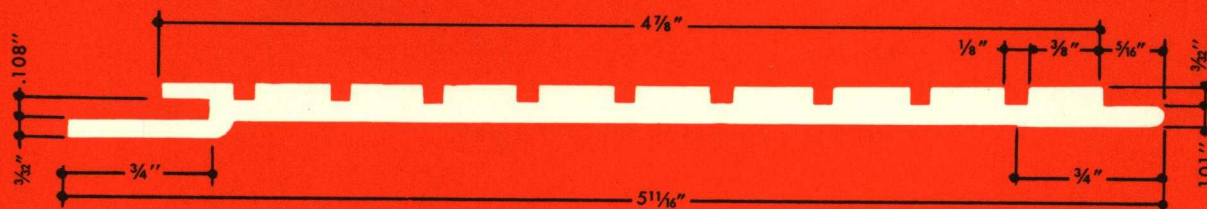


furring anchor 58222

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.385 LBS

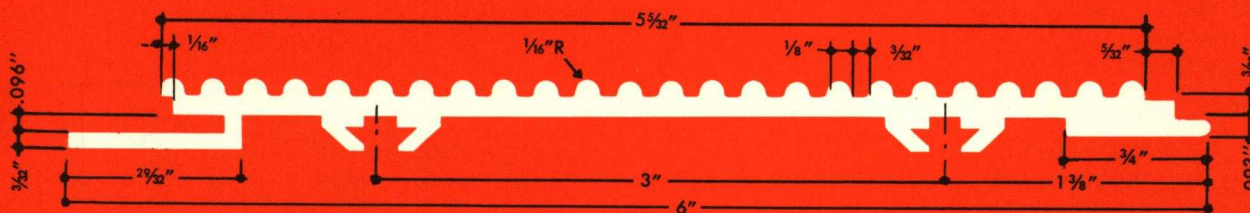
WALL SECTION





fascia 64016

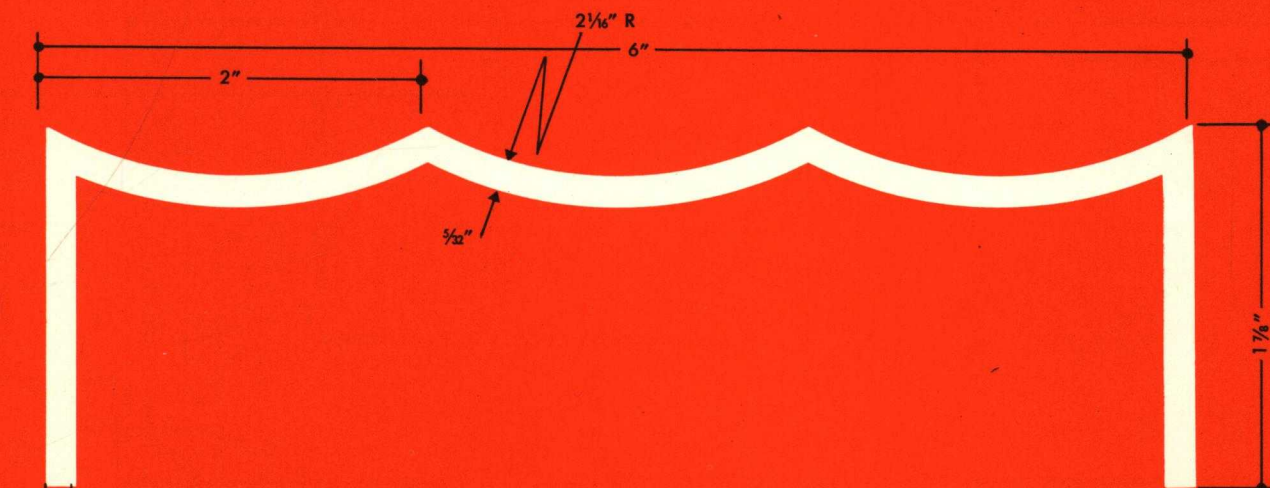
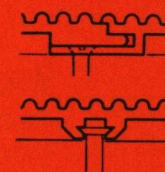
With concealed fastening;
assembles with itself to form
continuous fascia.
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—1.060 LBS



fascia 64097

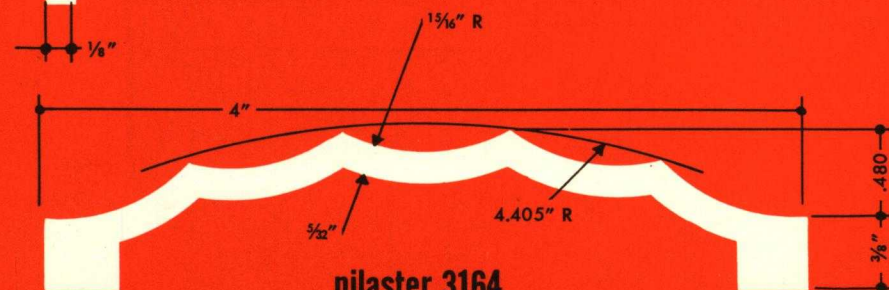
With concealed fastening;
assembles with itself to form
continuous fascia.
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—1.208 LBS

ALTERNATE FASTENING METHODS



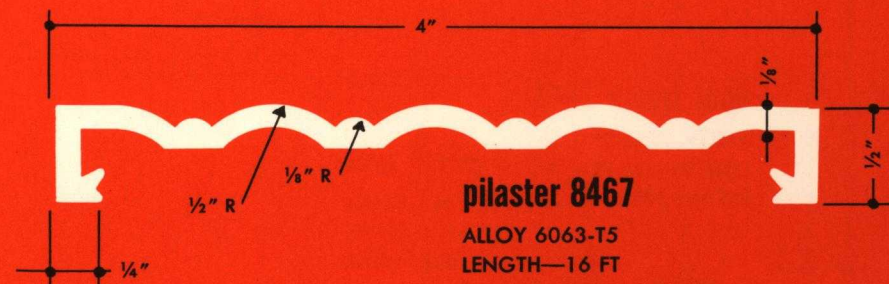
pilaster 3636

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—1.816 LBS



pilaster 3164

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.902 LBS



pilaster 8467

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.806 LBS

pilasters

Extruded sections indicated in white are full size

door accessories

Edging generally used for metal clad doors.



door edging 5393

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.431 LBS



door edging 5392

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.438 LBS

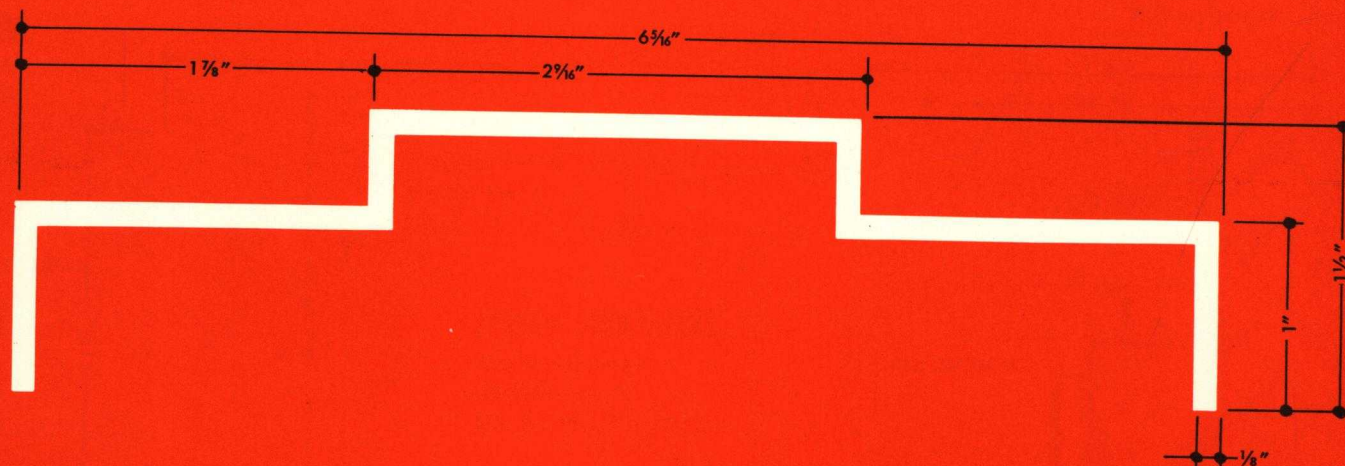


door edging 5389

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.431 LBS

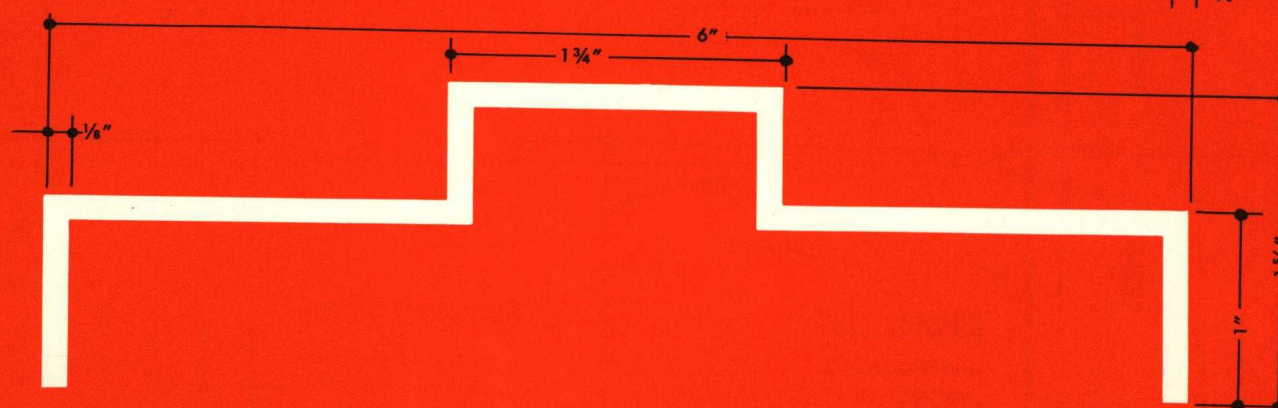
door frame 6498

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—1.359 LBS



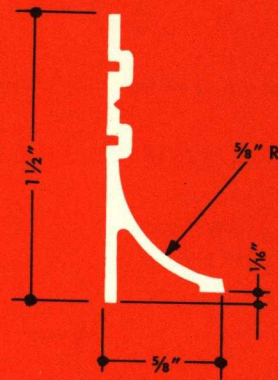
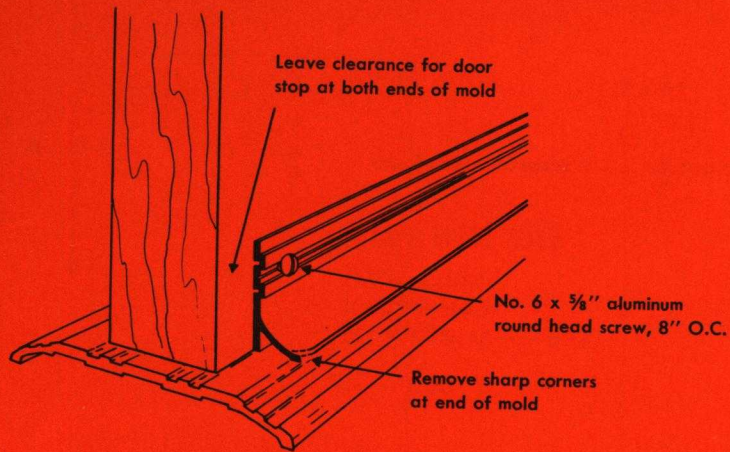
door frame 7648

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—1.350 LBS



Extruded sections indicated in white are full size

door accessories



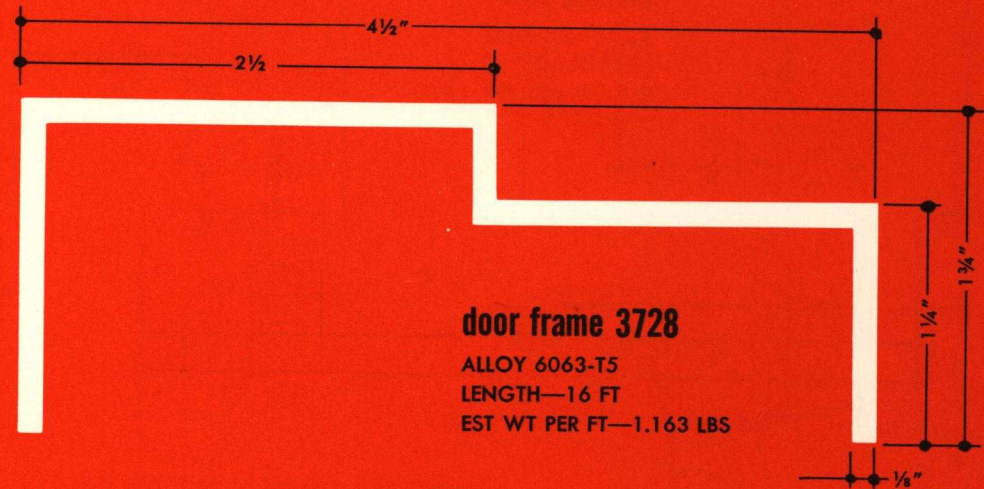
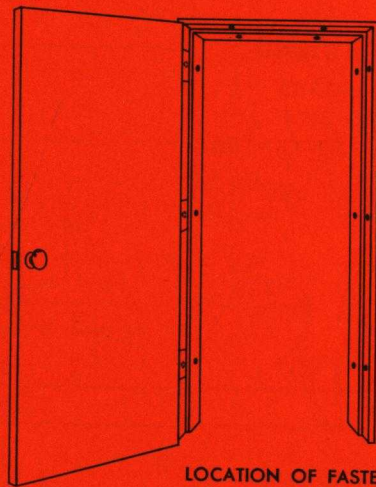
drip mold 70421

For exterior doors exposed to rain

ALLOY 6063-T5

LENGTH—16 FT

EST WT PER FT—.194 LBS

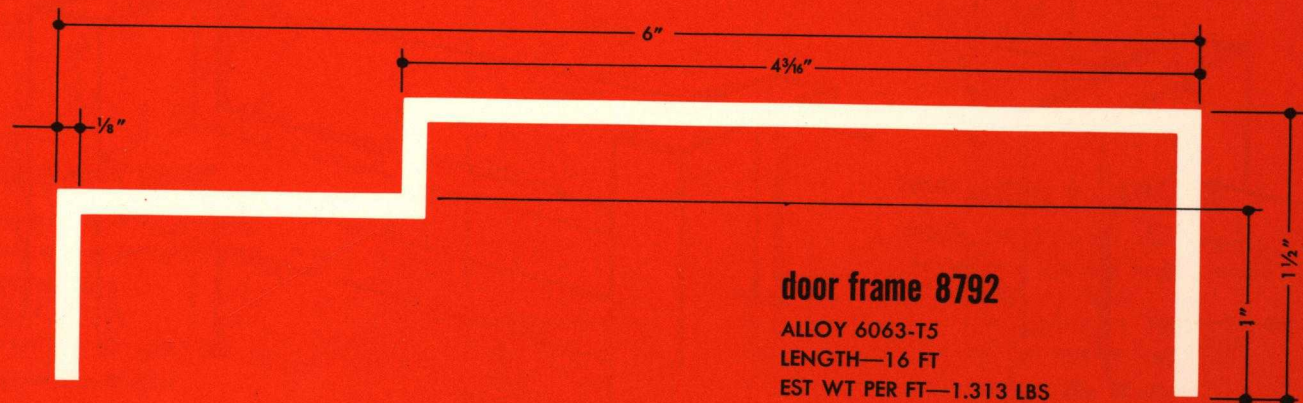
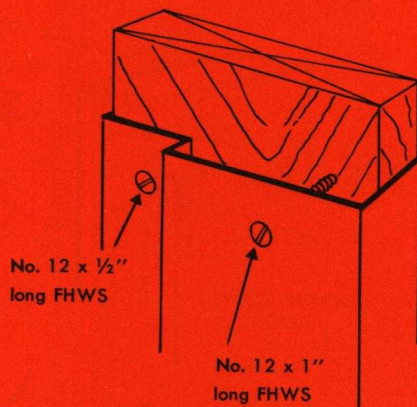


door frame 3728

ALLOY 6063-T5

LENGTH—16 FT

EST WT PER FT—1.163 LBS



door frame 8792

ALLOY 6063-T5

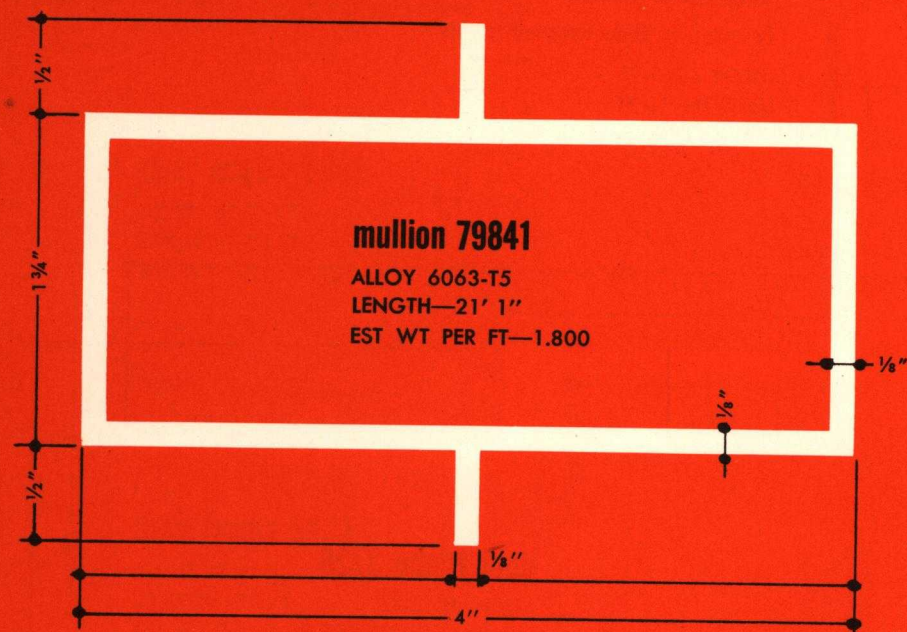
LENGTH—16 FT

EST WT PER FT—1.313 LBS

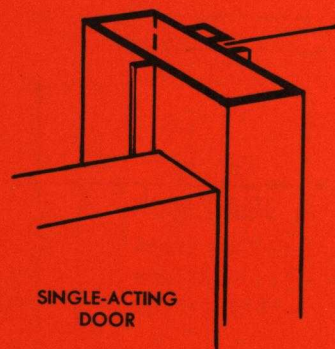
Extruded sections indicated in white are full size

mullions or frames

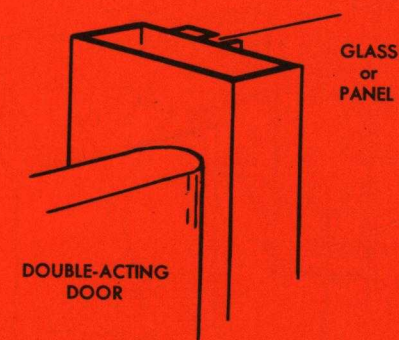
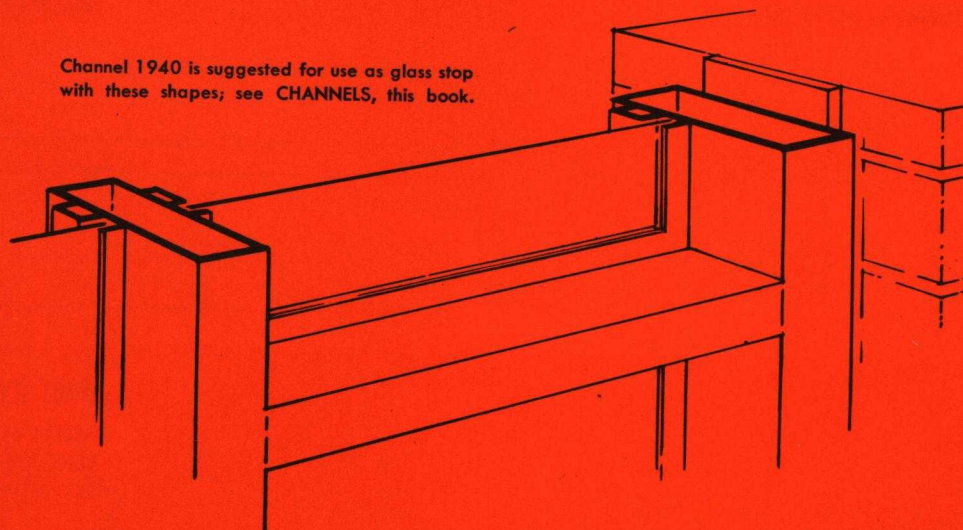
For use as mullions and framing components in entrances and storefronts



Channel 1940 is suggested for use as glass stop with these shapes; see CHANNELS, this book.

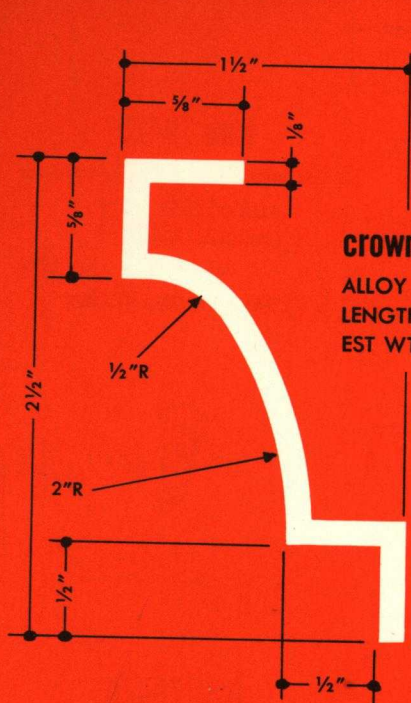


GLASS
OR
PANEL



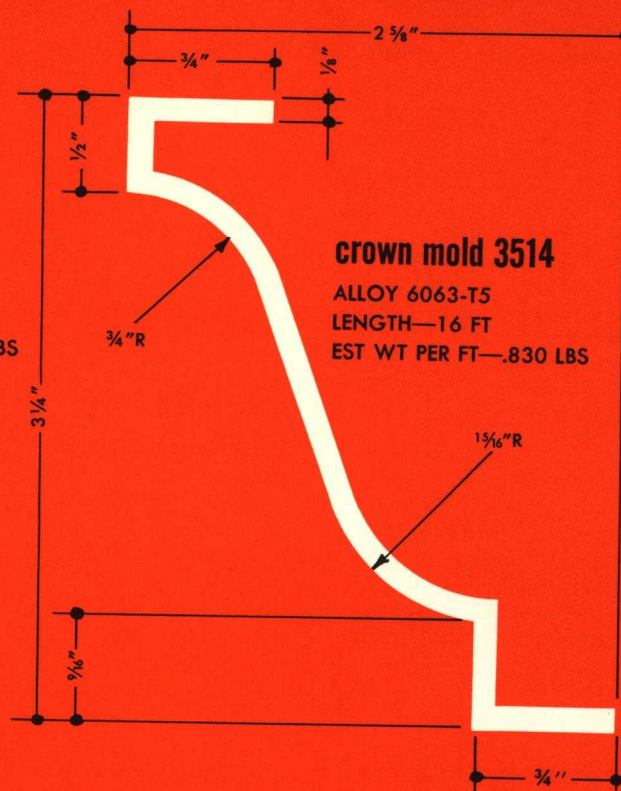
Extruded sections indicated in white are full size

interior trim



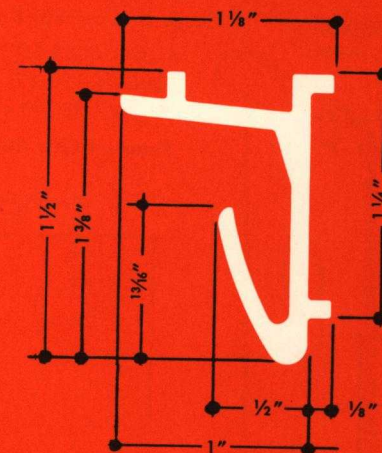
crown mold 3513

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.596 LBS



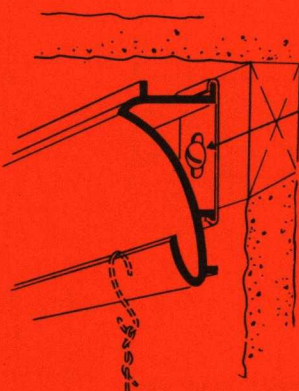
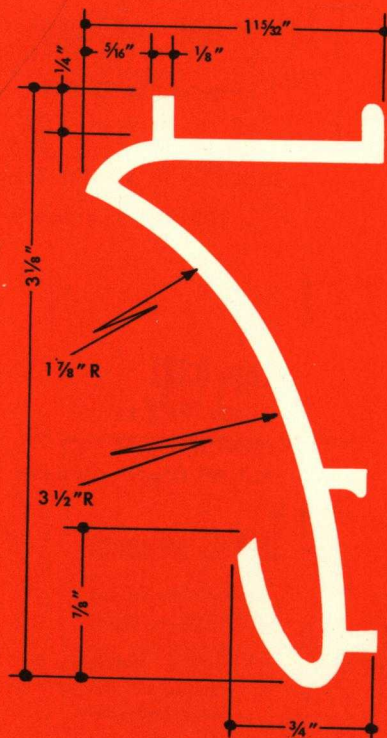
crown mold 3514

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.830 LBS



picture mold 58229

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.437 LBS

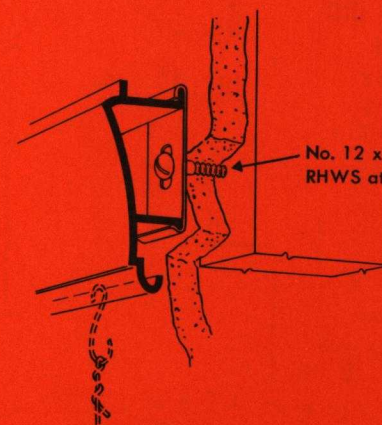
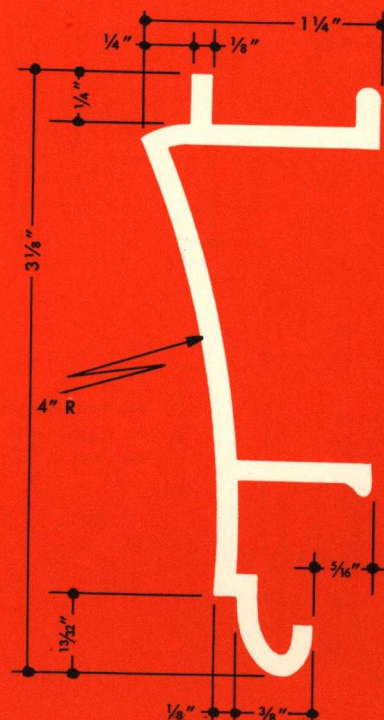


No. 12 x 1" long RHWS, about 16" O.C.

picture mold 70422

Snap onto concealed clip-fastener;
has exposed picture hanging trough

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.947 LBS
Snap-on Clip SC-201



No. 12 x 1 3/4" long RHWS at studs

picture mold 70423

Snap onto concealed clip-fastener;
has concealed picture hanging trough

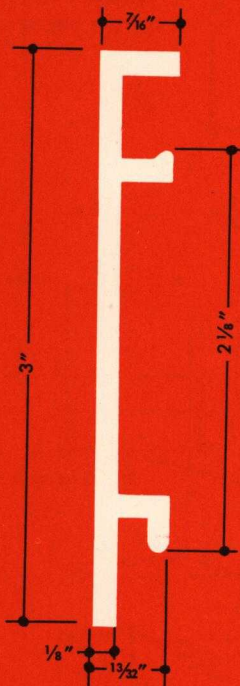
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.802 LBS
Snap-on Clip SC-201

Extruded sections indicated in white are full size

interior trim

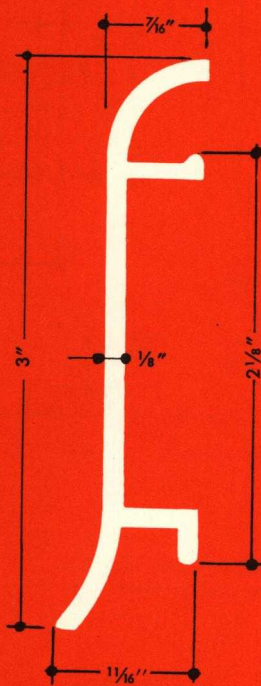
base mold 70424

Snaps onto concealed clip-fastener
 ALLOY 6063-T5
 LENGTH—16 FT
 EST WT PER FT—.613 LBS
 Snap-on Clip SC-201



cove base 84701

Snaps onto concealed clip-fastener
 ALLOY 6063-T5
 LENGTH—16 FT
 EST WT PER FT—.590 LBS
 Snap-on Clip SC-201



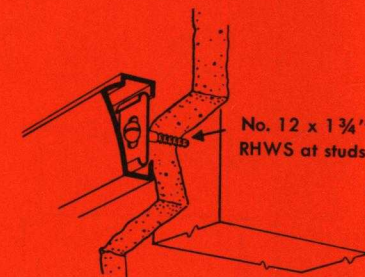
base mold 4490

ALLOY 6063-T5
 LENGTH—16 FT
 EST WT PER FT—.954 LBS



trim 70425

Snaps onto concealed clip-fastener
 ALLOY 6063-T5
 LENGTH—16 FT
 EST WT PER FT—.209 LBS
 Snap-on Clip SC-202



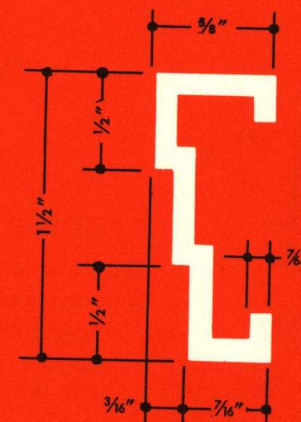
trim 70426

Snaps onto concealed clip-fastener
 ALLOY 6063-T5
 LENGTH—16 FT
 EST WT PER FT—.186 LBS
 Snap-on Clip SC-202



trim 8321

ALLOY 6063-T5
 LENGTH—16 FT
 EST WT PER FT—.365 LBS

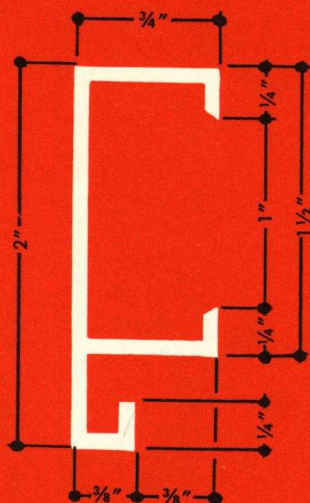


NOTE: Anchorage for all trim shapes will vary with the type of wall construction.

See following page for suggested trim 661 and 251

No. 12 x 1 3/4" long FHWS, about 2' O.C.

Extruded sections indicated in white are full size

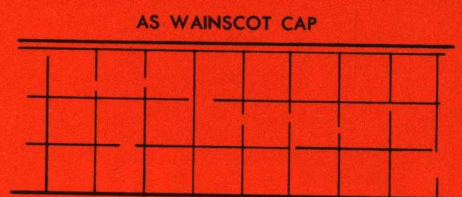
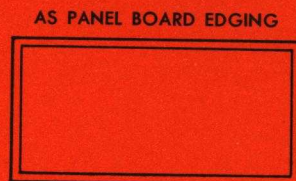
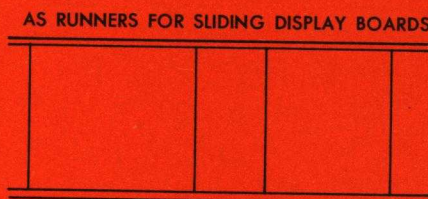
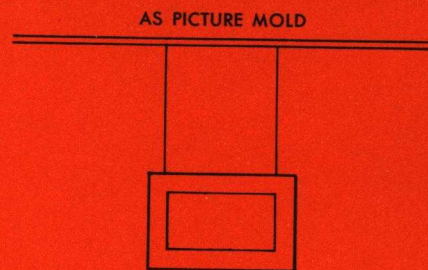
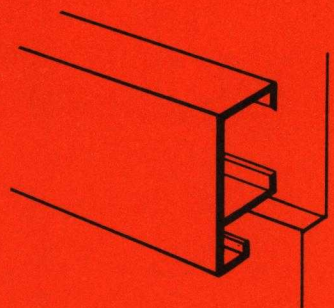
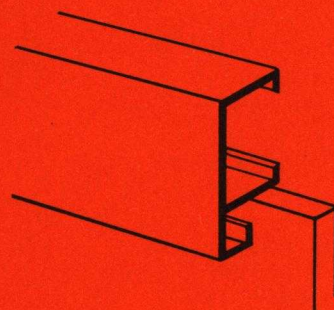
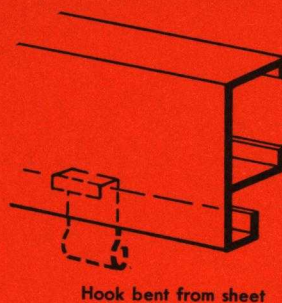


multipurpose trim 84702

Snap onto concealed clip-fastener same as trim 70425 at left

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.312 LBS

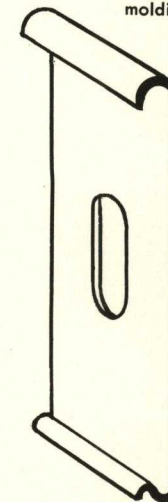
Snap-on Clip SC-202



interior trim

snap-on clips

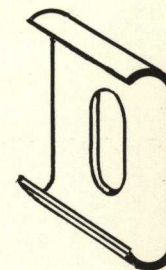
Spring steel clips for use with snap-on moldings and normal loads



clip SC-201

FOR:

70422
70423
70424
84701



clip SC-202

FOR:

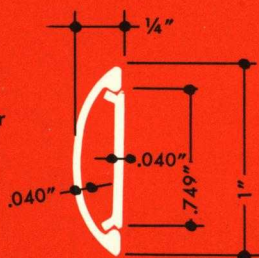
70425
70426
84702

chair rail

Snap onto concealed clip-fastener

snap-on 26936

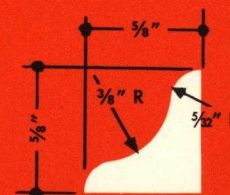
ALLOY 6063-T6
LENGTH—22 FT
EST WT PER FT—.064 LBS



clip 26937

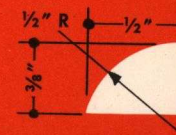
When used as clip, 2" lengths centered over studs are recommended; also suited for individual use as continuous trim.

ALLOY 6063-T6
LENGTH—22 FT
EST WT PER FT—.040 LBS



corner cove 251

ALLOY 6063-T42
LENGTH—16 FT
EST WT PER FT—.228 LBS

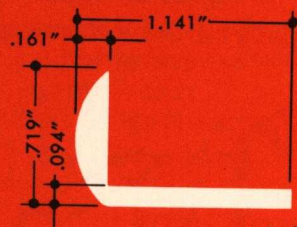


quarter-round 661

ALLOY 6063-T42
LENGTH—16 FT
EST WT PER FT—.168 LBS

miscellaneous trim

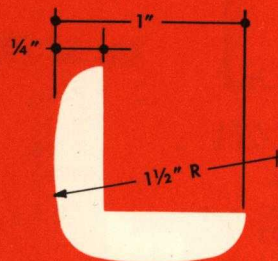
ALL SHAPES: LENGTH—16 FT



10

ALLOY 6063-T42
EST WT PER FT—.206 LBS

COUNTER
EDGING



787

ALLOY 6063-T42
EST WT PER FT—.433 LBS

CORNER
NOSING



9553

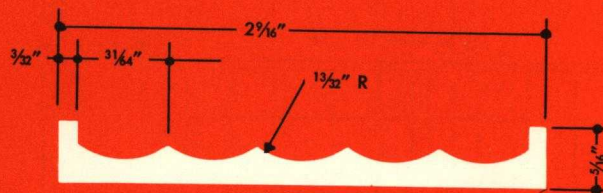
ALLOY 6063-T5
EST WT PER FT—.674 LBS



4477

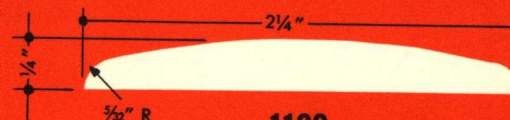
ALLOY 6063-T5
EST WT PER FT—.228 LBS

PANEL
EDGING



2372

ALLOY 6063-T5
EST WT PER FT—.473 LBS



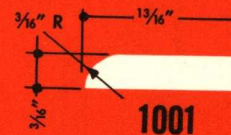
1122

ALLOY 6063-T42
EST WT PER FT—.558 LBS



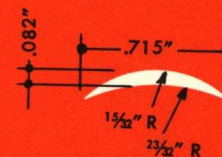
141

ALLOY 6063-T42
EST WT PER FT—.431 LBS



1001

ALLOY 6063-T42
EST WT PER FT—.174 LBS



1843

ALLOY 6063-T42
EST WT PER FT—.058 LBS

74

ALLOY 6063-T42



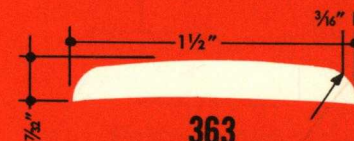
650

ALLOY 6063-T42
EST WT PER FT—.191 LBS



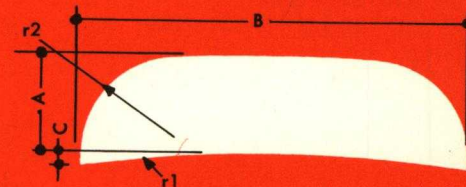
510

ALLOY 6063-T42
EST WT PER FT—.212 LBS



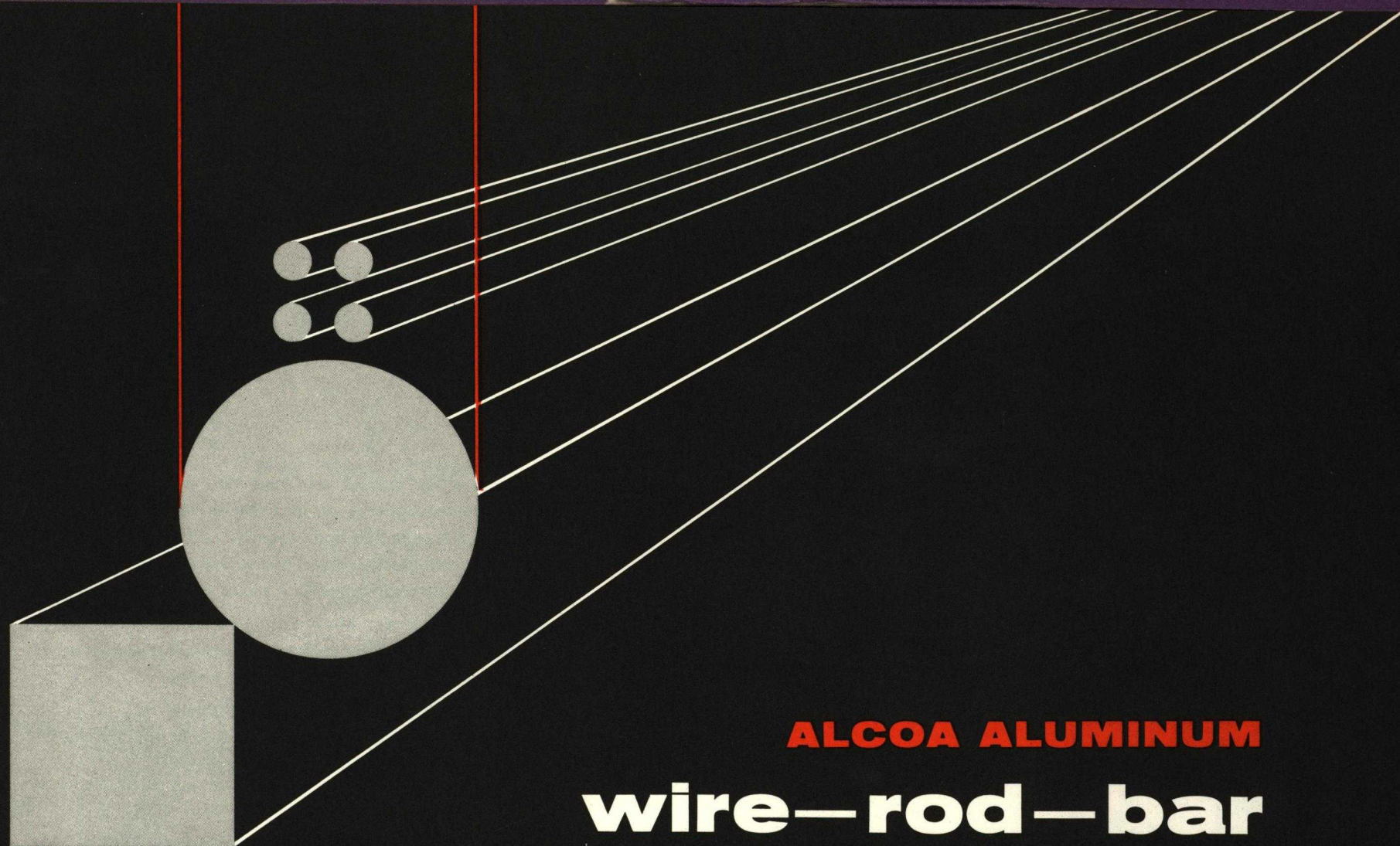
363

ALLOY 6063-T42
EST WT PER FT—.356 LBS



SECTION NUMBER	DIMENSIONS—INCHES					EST WT PER FT, LBS
	A	B	C	r 1	r 2	
74C	.188	.500	.019	.500	.188	.086
74A	.188	.625	.019	.625	.188	.107
74B	.188	.750	.020	.750	.188	.128
74H	.188	.875	.019	.875	.188	.137
74Q	.188	1.000	.020	1.000	.188	.152
74E	.250	.875	.025	.875	.250	.192
74D	.250	1.000	.025	1.250	.203	.228
74F	.250	1.250	.025	1.250	.250	.257
74P	.250	2.000	.025	4.000	.250	.418

Extruded sections indicated
in white are full size

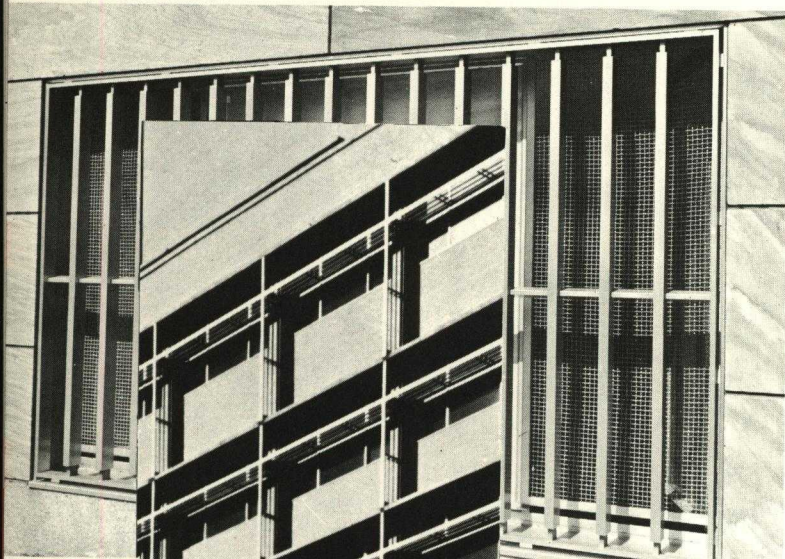


ALCOA ALUMINUM

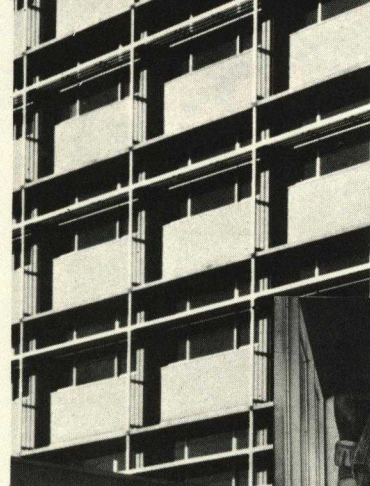
wire—rod—bar



FURNITURE



GRILLE AND SCREEN



SOLAR SHADING



STAIR RAILING

Wire, rod and bar products of Alcoa Aluminum offer the architect and designer an almost unlimited opportunity for exercise of imagination and ingenuity. They may be used in conjunction with extruded sections of irregular profile, with sheet, tube and fasteners of Alcoa Aluminum.

The ease of fabrication of aluminum by commonly employed metal working tools makes possible the execution of special designs within a reasonable budget.

The size range of available aluminum items gives the architect a choice of scale for decorative applications and the answer to innumerable structural problems.





round wire—drawn straight

LENGTH—12 FT and random

For diameters $\frac{3}{8}$ " and over, see ROD.

Coiled wire is also available in some diameters and tempers; consult warehouse.

Other standard sizes are available from warehouse stocks.

DIMENSION A	EST WT PER FT, LBS	ALLOY	
		1100-H18	6061-T6
$\frac{1}{8}$	.015		
$\frac{5}{32}$	.023		
$\frac{3}{16}$	.032		
$\frac{1}{4}$	.058		
$\frac{5}{16}$	.090		
		① Temper-H16	② Temper -H14



square wire—sharp corners, drawn straight

ALLOY 1100-H14

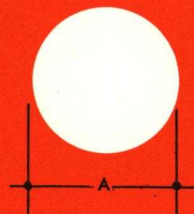
LENGTH—12 FT

For sizes $\frac{3}{8}$ " and over, see BAR

DIMENSION A	EST WT PER FT, LBS
$\frac{3}{16}$	.041
$\frac{1}{4}$	.075
$\frac{5}{16}$	.115

For WELDING, BRAZING and SOLDERING WIRE
see SPECIALTY PRODUCTS this book.

wire



straight rod

(Diameters $\frac{3}{8}$ " and above are called ROD)

Colored bars in columns indicate items stocked

Other standard sizes are available from warehouse stocks.

DIMENSION A	EST WT PER FT, LBS	ROLLED & COLD FINISHED 12 FT LENGTHS		EXTRUDED 16 FT LENGTHS
		ALLOY 1100-F	ALLOY 6061-T6	ALLOY 6063-T5
$\frac{3}{8}$	.130			
$\frac{7}{16}$	.177			
$\frac{1}{2}$	.235			
$\frac{9}{16}$	.292			
$\frac{5}{8}$	.368			
$\frac{3}{4}$	.530			
$\frac{7}{8}$	.706			
1	.942			
$1\frac{1}{8}$	1.168			
$1\frac{1}{4}$	1.442			
$1\frac{3}{8}$	1.745			
$1\frac{1}{2}$	2.076			
$1\frac{5}{8}$	2.436			
$1\frac{3}{4}$	2.826			
$1\frac{7}{8}$	3.244			

DIMENSION A	EST WT PER FT, LBS	ROLLED & COLD FINISHED 12 FT LENGTHS	
		ALLOY 1100-F	ALLOY 6061-T6
2	3.691		
$2\frac{1}{4}$	4.671		
$2\frac{1}{2}$	5.768		
3	8.304		
$3\frac{1}{4}$	9.746		
$3\frac{1}{2}$	11.303		
$3\frac{3}{4}$	12.975		
4	14.763		
$4\frac{1}{2}$	18.684		
5	23.067		
$5\frac{1}{2}$	27.999		
6	33.217		
$6\frac{1}{2}$	38.983		
7	45.212		

Random lengths only

rod

bar

square bar—sharp corners, extruded

ALLOY 6063-T5
LENGTH—16 FT

For sizes under 3/8", see WIRE

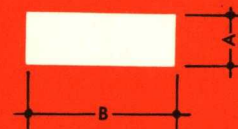


DIMENSION
A

EST WT
PER FT, LBS

3/8	.168
1/2	.300
5/8	.468
3/4	.674
1	1.200
1 1/4	1.875
1 1/2	2.700

rectangular bar—sharp corners



Colored bars or notes in columns
indicate items stocked

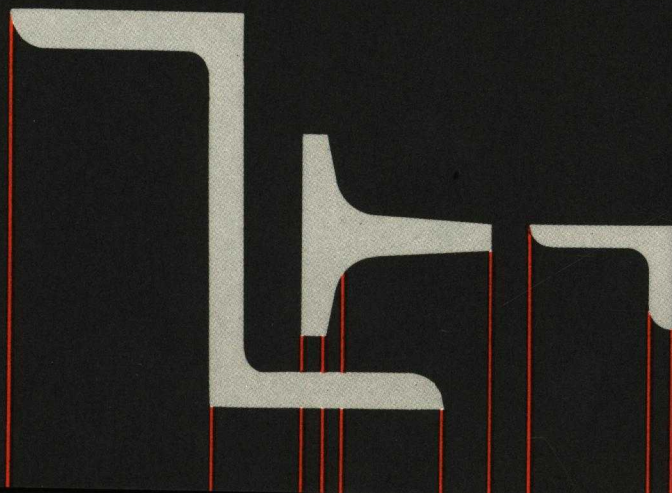
DIMENSIONS—INCHES		EST WT PER FT, LBS	EXTRUDED ALLOY 6063-T5 16 FT LENGTHS	6061-T6; 12 FT LENGTHS COLD FINISHED & ROLLED	DIMENSIONS—INCHES		EST WT PER FT, LBS	EXTRUDED ALLOY 6063-T5 16 FT LENGTHS	6061-T6; 12 FT LENGTHS	
A	B				A	B			COLD FINISHED	ROLLED
1/8	1/2	.075			3/8	1/2	.224			
1/8	5/8	.094			3/8	5/8	.281			
1/8	3/4	.113			3/8	3/4	.338			
1/8	1	.150			3/8	1	.450			
1/8	1 1/4	.187			3/8	1 1/4	.563			
1/8	1 1/2	.226			3/8	1 1/2	.675			
1/8	1 3/4	.263			3/8	2	.900			
1/8	2	.300			3/8	3	1.350			
3/16	1/2	.113			3/8	4	1.762			
3/16	3/4	.169			3/8	6	2.643			
3/16	1	.226			1/2	3/4	.450			
3/16	1 1/4	.282			1/2	1	.600			
3/16	1 1/2	.338			1/2	1 1/4	.750			
3/16	2	.451			1/2	1 1/2	.900			
3/16	2 1/2	.564			1/2	2	1.200			
1/4	1/2	.150			1/2	2 1/2	1.500			
1/4	3/8	.187			1/2	3	1.800			
1/4	3/4	.225			1/2	4	2.400			
1/4	1	.300			1/2	6	3.600			
1/4	1 1/4	.375			3/4	1	.900			
1/4	1 1/2	.450			3/4	1 1/2	1.350			
1/4	1 3/4	.525			3/4	2	1.800			
1/4	2	.600			3/4	3	2.650			
1/4	2 1/2	.750			1	1 1/2	1.800			
1/4	3	.900			1	2	2.400			
					1	4	4.800			Random lengths
					1 1/4	2	3.000			
					1 1/2	2 1/2	4.400			Random lengths

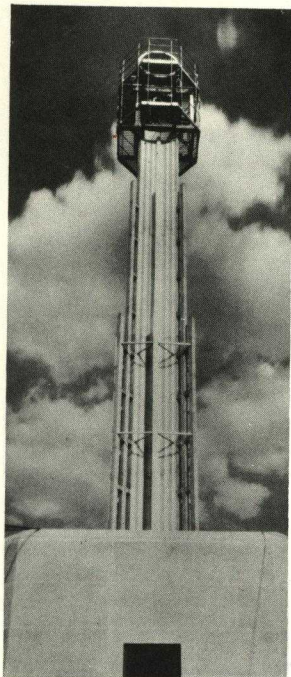
hexagonal bar

See HEXAGONAL BALUSTERS, this book



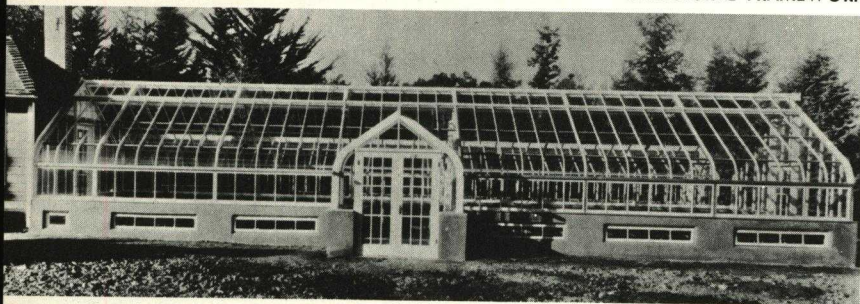
ALCOA ALUMINUM
structural shapes





TOWER SUPPORTS AND TRIM

STRUCTURAL FRAMEWORK

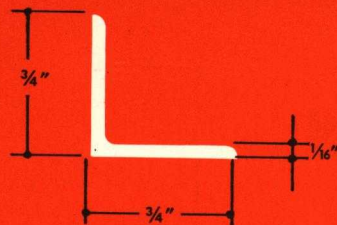


alcoa Aluminum is being used in ever increasing quantities for structural applications in contemporary building construction. Economies have been realized in design, erection time and in maintenance. Shop fabricated subassemblies make possible closer control of workmanship and rapid erection in the field.

The resistance of aluminum to corrosion from exposure to industrial and seacoast atmospheres eliminates the need for periodic application of protective coatings.

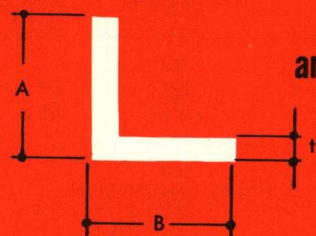
In selecting structural members, it should be noted that the surface textures of extruded and rolled sections may differ. Extruded sections may be slightly smoother. This difference is of minor importance unless surface quality is a critical characteristic of the design.





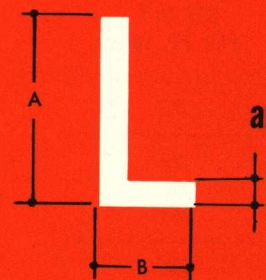
angle 78-K
 ALLOY 6062-T6
 LENGTH—22 FT
 EST WT PER FT—.106 LBS
 full size

special angles



angles—equal legs, sharp corners

ALLOY 6063-T5
 LENGTH—16 FT



angles—unequal legs, sharp corners

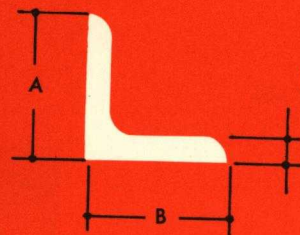
ALLOY 6063-T5
 LENGTH—16 FT

SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A x B	t	
1312	1/2 x 1/2	1/16	.070
79-H	1/2 x 1/2	1/8	.131
79-O	5/8 x 5/8	1/8	.168
472	3/4 x 3/4	1/16	.108
79-A	3/4 x 3/4	1/8	.206
79-M	1 x 1	1/16	.145
79-G	1 x 1	1/8	.281
79-B	1 x 1	3/16	.408
79-T	1 1/4 x 1 1/4	1/8	.356
79-P	1 1/4 x 1 1/4	3/16	.519
79-V	1 1/2 x 1 1/2	1/8	.431
79-N	1 1/2 x 1 1/2	3/16	.633
79-Y	1 3/4 x 1 3/4	1/8	.506
79-X	2 x 2	1/8	.581
79-Q	2 x 2	3/16	.857
79-E	2 x 2	1/4	1.124

SECTION NUMBER	DIMENSIONS—INCHES		EST WT PER FT, LBS
	A x B	t	
1944	3/4 x 3/8	3/32	.116
1943	1 x 1/2	3/32	.158
7201	1 x 1/2	1/8	.206
7385	1 x 3/4	1/8	.244
895	1 1/4 x 1/2	1/8	.244
5137	1 1/2 x 3/4	1/8	.319
7613	1 1/2 x 1	1/8	.356
87070	1 3/4 x 7/8	*	.209
6844	2 x 1	1/8	.431
6746	3 1/2 x 1 1/4	1/8	.694
Temper-T6 only 2880	5 1/4 x 2 1/4	1/8	1.106

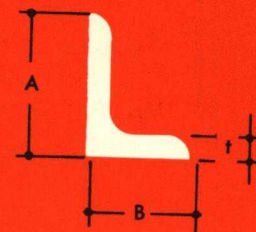
*Long leg is .062" thick;
 short leg is .081" thick.

standard angles *



angles—rolled, equal legs

ALLOY 6061-T6
LENGTH—25 FT



angles—rolled, unequal legs

ALLOY 6061-T6
LENGTH—25 FT

DIMENSIONS—INCHES		EST WT PER FT, LBS
A x B	t	
3/4 x 3/4	1/8	.20
1 x 1	1/8	.27
1 x 1	3/16	.40
1 x 1	1/4	.51
1 1/4 x 1 1/4	1/8	.35
1 1/4 x 1 1/4	3/16	.51
1 1/4 x 1 1/4	1/4	.66
1 1/2 x 1 1/2	1/8	.43
1 1/2 x 1 1/2	3/16	.62
1 1/2 x 1 1/2	1/4	.81
1 3/4 x 1 3/4	1/8	.49
1 3/4 x 1 3/4	3/16	.73
1 3/4 x 1 3/4	1/4	.95
2 x 2	1/8	.57
2 x 2	3/16	.84
2 x 2	1/4	1.11
2 x 2	3/8	1.60
2 1/2 x 2 1/2	3/16	1.07
2 1/2 x 2 1/2	1/4	1.41
2 1/2 x 2 1/2	5/16	1.73
3 x 3	3/16	1.29
3 x 3	1/4	1.68
3 x 3	5/16	2.08
3 x 3	3/8	2.47
extruded 3 1/2 x 3 1/2	5/16	2.45
4 x 4	1/4	2.28
4 x 4	5/16	2.82
4 x 4	3/8	3.36

DIMENSIONS—INCHES		EST WT PER FT, LBS
A x B	t	
1 1/2 x 1 1/4	1/8	.39
1 1/2 x 1 1/4	3/16	.56
1 1/2 x 1 1/4	1/4	.74
1 3/4 x 1 1/4	1/8	.43
1 3/4 x 1 1/4	3/16	.62
1 3/4 x 1 1/4	1/4	.81
extruded 2 x 1 1/2	1/8	.49
2 x 1 1/2	3/16	.73
2 x 1 1/2	1/4	.95
2 1/2 x 2	3/16	.96
2 1/2 x 2	1/4	1.25
2 1/2 x 2	5/16	1.54
3 x 2	3/16	1.07
3 x 2	1/4	1.40
3 x 2	3/8	2.05
extruded 3 x 2 1/2	1/4	1.53
extruded 3 1/2 x 2 1/2	1/4	1.68
4 x 3	1/4	1.99
4 x 3	3/8	2.92

*Angle sections listed as "standard" are approximations of American Standard sections. For elements of sections and detailed dimensions, consult *Alcoa Structural Handbook*.



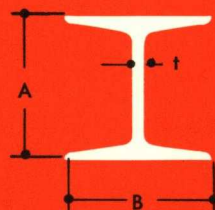
ALLOY 6061-T6
LENGTH—25 FT

standard I-beams *

*I-beams and H-beams sections listed as "standard" are approximations of American Standard sections. For elements of sections and detailed dimensions, consult *Alcoa Structural Handbook*.

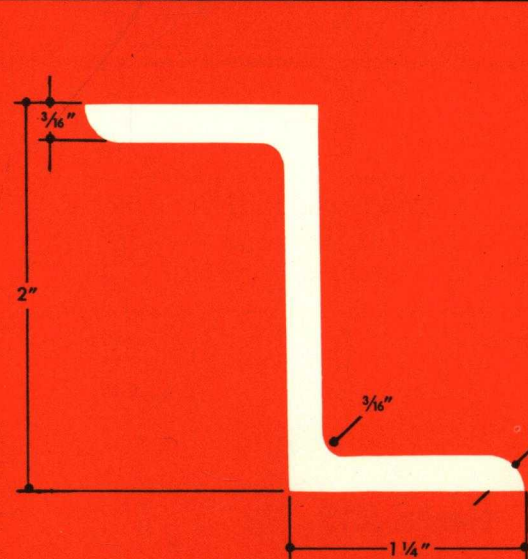
DIMENSIONS—INCHES		EST WT PER FT, LBS		DIMENSIONS—INCHES		EST WT PER FT, LBS	
A x t	B			A x t	B		
3 x .170	2.330	1.96	ROLLED	5 x .210	3.000	3.42	EXTRUDED
3 x .349	2.509	2.59		5 x .494	3.284	5.09	
4 x .190	2.660	2.64	ROLLED	6 x .230	3.330	4.30	EXTRUDED
4 x .326	2.796	3.28		6 x .343	3.443	5.09	

DIMENSIONS—INCHES		EST WT PER FT, LBS
A x t	B	
4 x .313	4.00	4.70 extruded



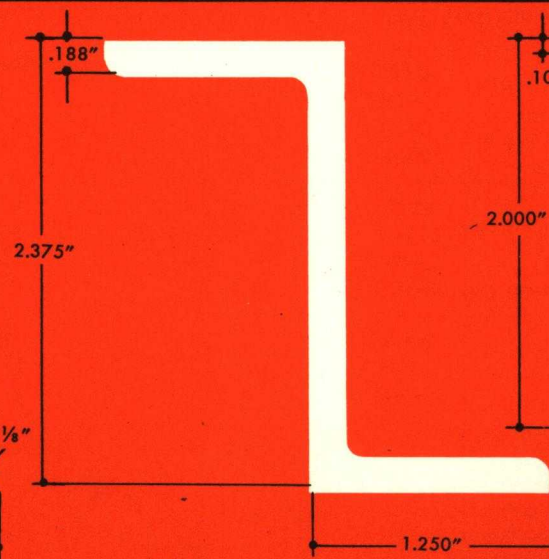
ALLOY 6061-T6
LENGTH—25 FT

standard H-beams *



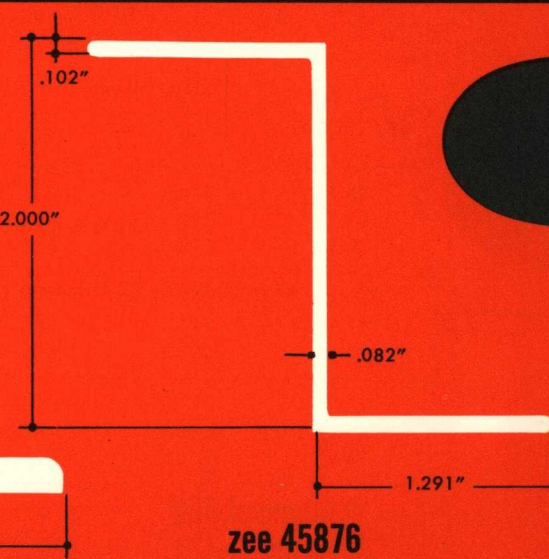
zee 771-C

ALLOY 6062-T6
LENGTH—22 FT
EST WT PER FT—.938 LBS



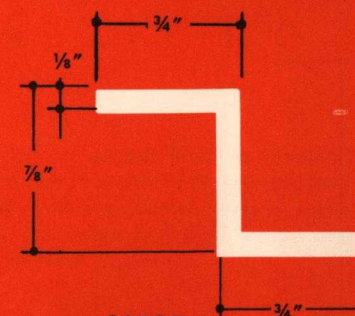
zee 7088

ALLOY 6062-T6
LENGTH—22 FT
EST WT PER FT—1.022 LBS



zee 45876

ALLOY 6062-T6
LENGTH—24 FT
EST WT PER FT—.498 LBS



zee 23787

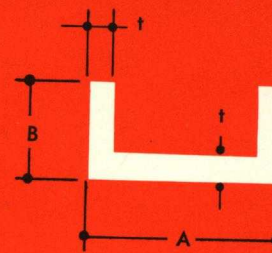
ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.319 LBS

zees

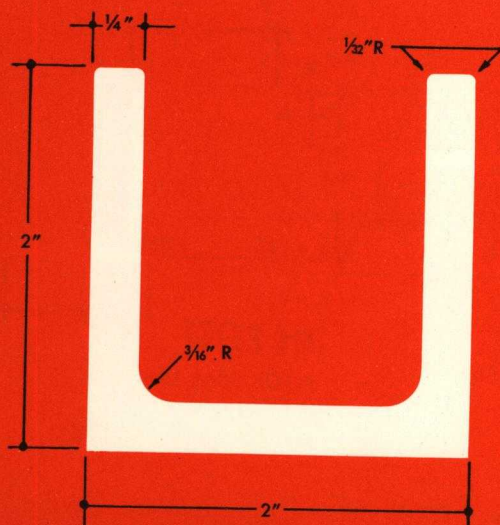
special channels

channels—sharp corners

ALLOY 6063-T5
LENGTH—16 FT



SECTION NUMBER	DIMENSIONS—INCHES			EST WT PER FT, LBS
	A	B	t	
2335	1/2	3/8	1/8	.150
2749	1/2	1/2	3/32	.148
8997	1/2	3/4	1/8	.263
4533	5/8	5/8	1/8	.244
2715	3/4	3/8	1/8	.187
3547	3/4	3/4	1/8	.300
20 ft lengths only 1940	1	1/2	1/8	.263
7484	1	1	1/8	.413
20 ft lengths only 4286	1 1/4	1/2	1/8	.300
87071	1 1/4	3/4	1/8	.374
4542	1 1/4	1 1/4	1/8	.526
20 ft lengths only { 3507	1 7/16	1/2	3/32	.251
4300	1 1/2	1/2	1/8	.337
8449	1 3/4	1/2	1/8	.374
2105	1 3/4	3/4	1/8	.450
5714	1 3/4	1	1/8	.524
2388	2	1/2	1/8	.413
20 ft lengths only { 5527	2	1	1/8	.564
22266	2.100	.550	.100	.360
2748	2 1/4	7/8	1/8	.563
Alloy 6062-T6, 22 ft lengths only 40517	2 1/2	1 1/2	1/8	.787
6594	3	1/2	1/8	.563
3776	3	1	1/8	.713
17146	5	2	3/16	1.940



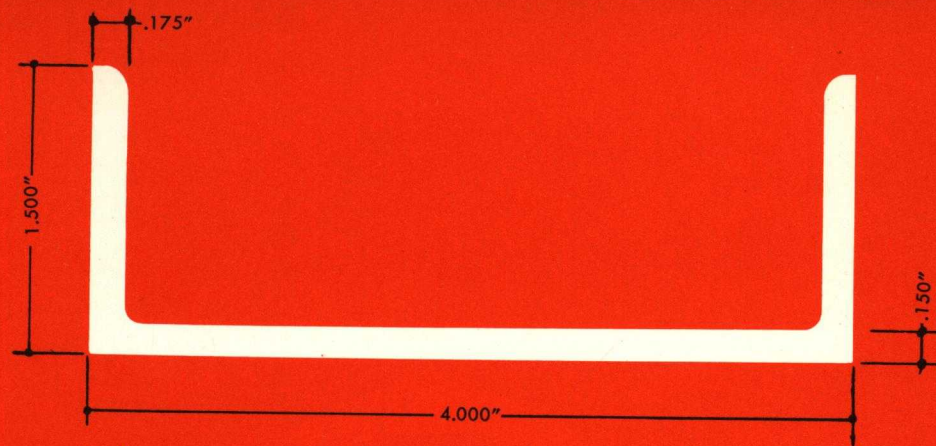
channel 892

ALLOY 6062-T6
LENGTH—22 FT
EST WT PER FT—1.667 LBS
full size



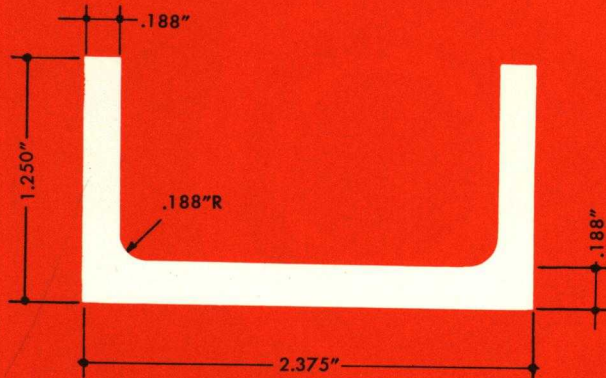
channel 3619

ALLOY 6063-T5
LENGTH—16 FT
EST WT PER FT—.120 LBS
full size



channel 22819

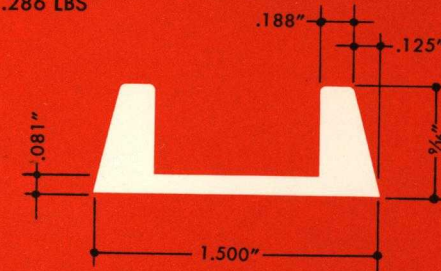
ALLOY 6062-T6
LENGTH—24 FT
EST WT PER FT—1.286 LBS



Extruded sections indicated in white are full size

channel 2296

ALLOY 6062-T6
LENGTH—24 FT
EST WT PER FT—1.031 LBS

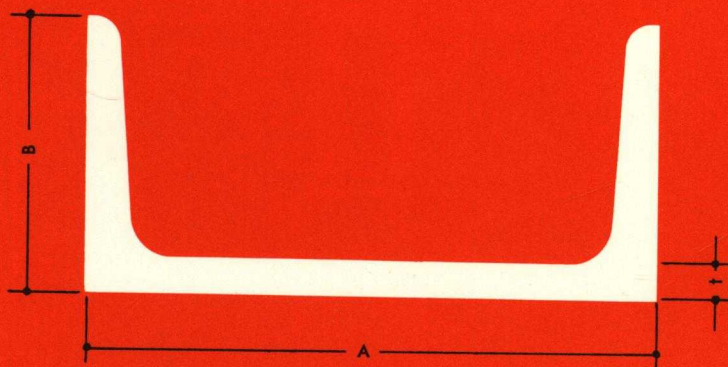


channel 45877

ALLOY 6063-T6
LENGTH—16 FT
EST WT PER FT—.424 LBS

channel—rolled

ALLOY 6061-T6
LENGTH—25 FT



DIMENSIONS—INCHES

A x t	B	EST WT PER FT, LBS
3 x .170	1.410	1.42
3 x .258	1.498	1.73
3 x .356	1.596	2.07
4 x .180	1.580	1.84
4 x .247	1.647	2.15
4 x .320	1.720	2.50
5 x .190	1.750	2.31
5 x .325	1.885	3.10
5 x .472	2.032	3.97
6 x .225	1.945	3.00
6 x .314	2.034	3.62
6 x .437	2.157	4.49
7 x .230	2.110	3.53
8 x .250	2.290	4.25
8 x .487	2.527	6.47

standard channels *

*Channel sections listed as "standard" are approximations of American Standard channels. For elements of sections and detailed dimensions, consult *Alcoa Structural Handbook*.

tees

tee 87069

Accessory for acoustical ceiling system; see PERFORATED CORRUGATED SHEET, this book

ALLOY 6063-T5

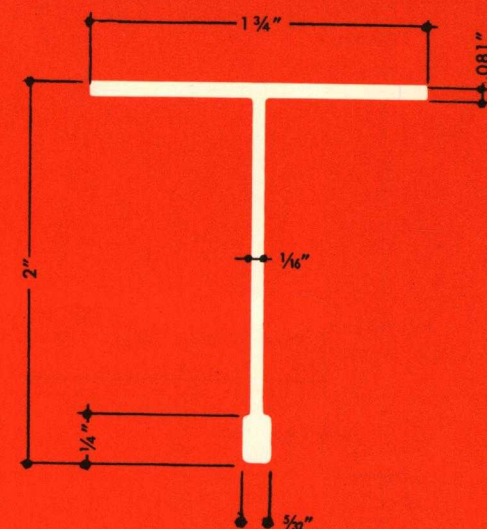
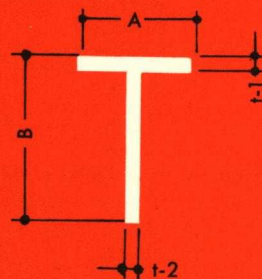
LENGTH—16 FT

EST WT PER FT—.341 LBS

tees—sharp angles, sharp corners

ALLOY 6063-T5

LENGTH—16 FT

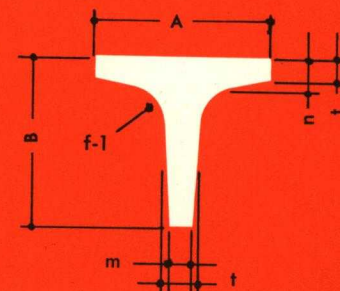


SECTION NUMBER	DIMENSIONS—INCHES				EST WT PER FT, LBS
	A	B	t-1	t-2	
18307	3/4	3/4	1/8	1/8	.206
4716	3/4	1 1/4	1/8	1/8	.280
7030	7/8	1 1/4	3/32	1/8	.328
1257	1	1/2	1/8	3/8	.319
18308	1	3/4	1/8	1/8	.244
25055	1	1	1/8	1/8	.281
5951	1 1/4	7/8	1/8	1/8	.300
18906	2	3/4	1/8	1/8	.394

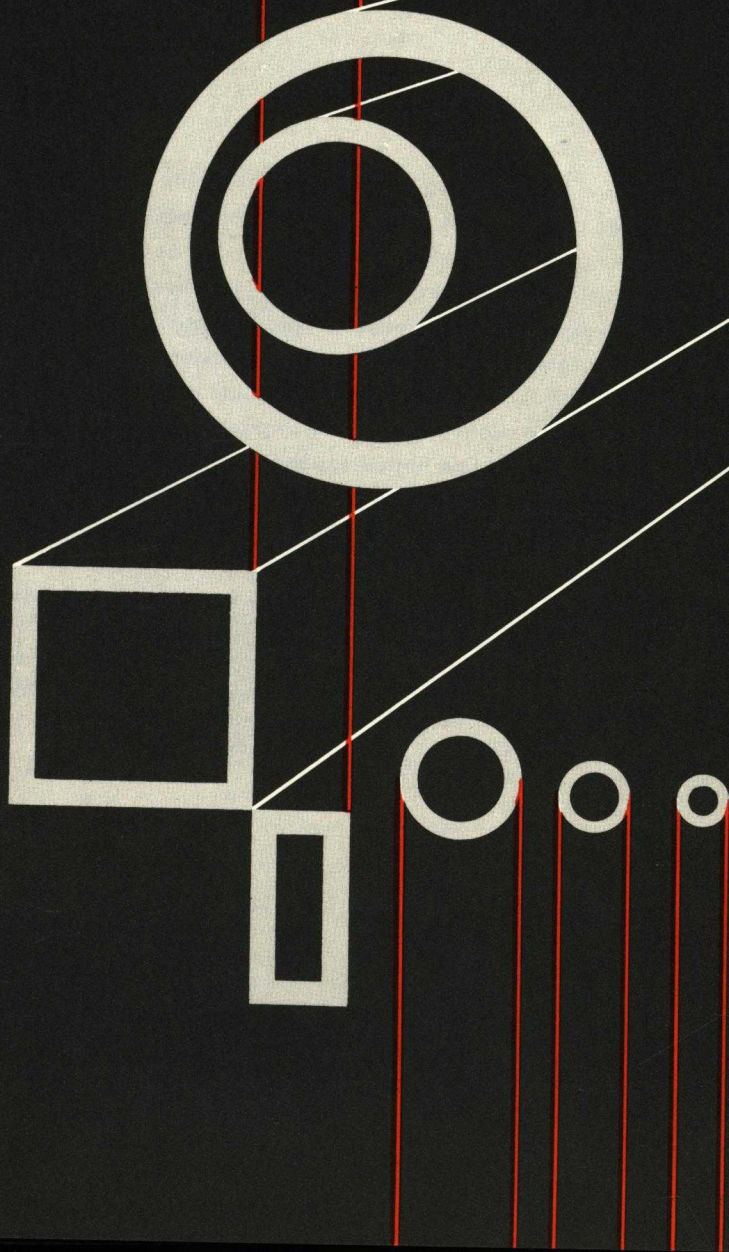
tees—taper stem and flanges, rounded angles, sharp corners

ALLOY 6062-T6

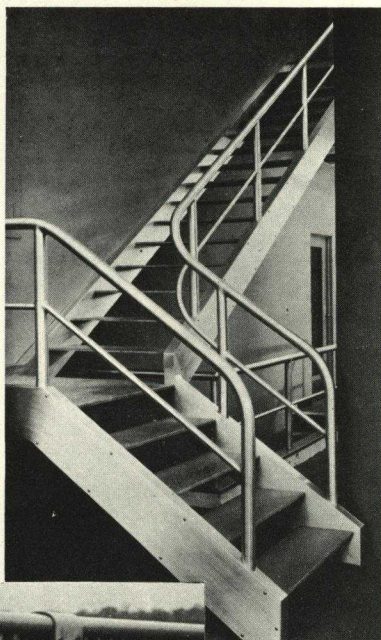
LENGTH—22 FT



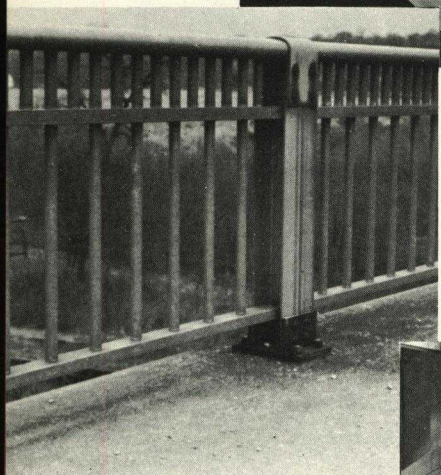
SECTION NUMBER	DIMENSIONS—INCHES					EST WT PER FT, LBS	SECTION NUMBER	DIMENSIONS—INCHES					EST WT PER FT, LBS
	A x B	t	f-1	m	n			A x B	t	f-1	m	n	
853-F	1 x 1	1/8	1/8	5/32	5/32	.320	853-K	1 1/2 x 1 1/2	3/16	3/16	7/32	7/32	.700
853-B	1 1/2 x 1 1/4	1/8	1/8	5/32	5/32	.450	853-G	1 1/2 x 1 1/2	1/4	3/16	7/32	7/32	.890
853-N	1 1/2 x 1 1/4	3/16	1/8	7/32	7/32	.628							



ALCOA ALUMINUM
pipe—tube

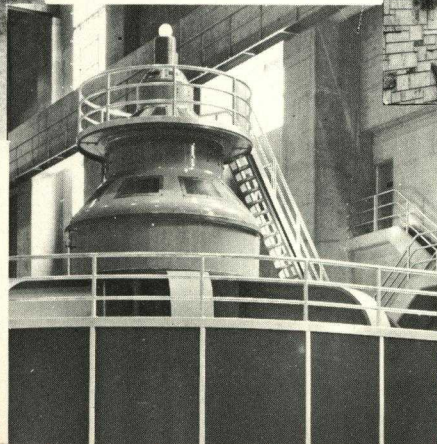


STAIR RAILING

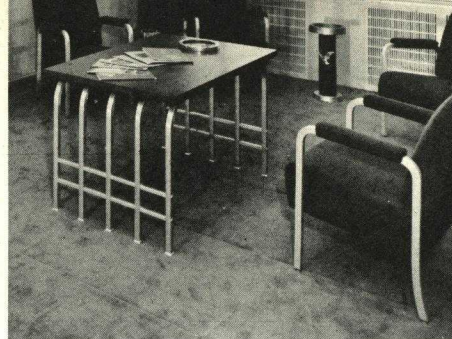


BRIDGE RAILING

GUARD RAILING



DECORATION

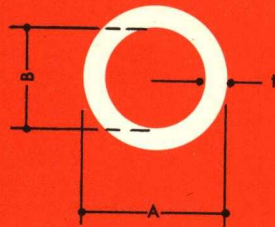


FURNITURE



pipe and tube of Alcoa Aluminum are available in a wide range of sizes, cross sections and wall thicknesses. Tube of square, rectangular and circular cross section have an unlimited variety of applications in special architectural details such as decorative partition screens, awning frames, railings, furniture and lighting fixtures; for light structural systems such as flexible exhibition and shelving units and for light load bearing columns and posts. The potential of pipe and tube sections in such applications may be further expanded by their use in conjunction with sections to be found in this book under the headings STRUCTURAL SHAPES and TRIM—MOLDING. While special fittings are available for two sizes of pipe for railing use (see PIPE RAILINGS, this book) the architect need not be limited by these. A more flowing railing design is economically attainable, for the ductility of aluminum pipe enables it to take bends of a distinctive character.





standard pipe size (IPS)

LENGTH—20 FT

pipe

Colored bars in columns indicate items stocked

SCHEDULE 40 (standard)

NOMINAL PIPE SIZE	DIMENSIONS—INCHES			EST WT PER FT, LBS	ALLOYS		
	A	B	t		3003-H112	6061-T6	6063-T6
12 ft lengths only { 1/8 1/4 3/8 1/2 3/4	.405	.269	.068	.085			
	.540	.364	.088	.147			
	.675	.493	.091	.196			
	.840	.622	.109	.294			
	1.050	.824	.113	.391			
	1.315	1.049	.133	.581			
Available in alloy 6063-T832 for handrail applications. See "Railings." { 1 1/4 1 1/2 2	1.660	1.380	.140	.786			
	1.900	1.610	.145	.940			
	2.375	2.067	.154	1.264			
12 ft lengths only { 2 1/2 3 3 1/2 4 5 6 8 10 12	2.875	2.469	.203	2.004			
	3.500	3.068	.216	2.621			
	4.000	3.548	.226	3.151			
	4.500	4.026	.237	3.733			
	5.563	5.047	.258	5.057			
	6.625	6.065	.280	6.564			
	8.625	7.981	.322	9.878			
	10.750	10.020	.365	14.000			
	12.750	12.000	.375	18.520			

SCHEDULE 5 (featherweight) ALLOY 6063-T6

NOMINAL PIPE SIZE	DIMENSIONS—INCHES			EST WT PER FT, LBS
	A	B	t	
3/4				
1				
1 1/4	1.660	1.530	.065	.383
1 1/2	1.900	1.770	.065	.441
2	2.375	2.245	.065	.555
2 1/2	2.875	2.709	.083	.856
3	3.500	3.334	.083	1.048
3 1/2				
4	4.500	4.334	.083	1.354

SCHEDULE 10 (light) ALLOY 6063-T6

DIMENSIONS—INCHES			EST WT PER FT, LBS
A	B	t	
1.050	.884	.083	.297
1.315	1.097	.109	.486
1.660	1.442	.109	.625
1.900	1.682	.109	.721
2.375	2.157	.109	.913

SCHEDULE 80 (extra heavy) ALLOY 6061-T6

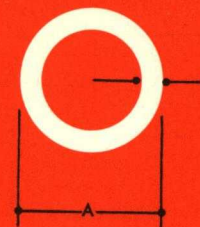
DIMENSIONS—INCHES			EST WT PER FT, LBS
A	B	t	
1.315	.957	.179	.751
1.660	1.278	.191	1.037
1.900	1.500	.200	1.256
2.375	1.939	.218	1.737
3.500	2.900	.300	3.547
4.000	3.364	.318	4.326

All sizes available in alloy 6063-T6

tube

round tube—drawn LENGTH—12 FT

Colored bars in columns indicate items stocked



DIMENSIONS—INCHES		EST WT PER FT, LBS	ALLOYS AND TEMPER					DIMENSIONS—INCHES		EST WT PER FT, LBS	ALLOYS AND TEMPER				
A	t		3003-H14	3003-H18	2024-T3	5052-O	6061-T6	A	t		3003-H14	3003-H18	2024-T3	5052-O	6061-T6
1/8	.035	.012						5/8	.028	.062					
3/16	.022	.013						5/8	.035	.076					
3/16	.035	.020						5/8	.042	.090					
3/16	.049	.025						5/8	.049	.104					
1/4	.022	.018						5/8	.058	.121					
1/4	.028	.023						5/8	.065	.134					
1/4	.035	.028						3/4	.035	.092					
1/4	.049	.036						3/4	.049	.127					
1/4	.058	.055						3/4	.058	.148					
5/16	.035	.036						3/4	.065	.164					
5/16	.049	.048						3/4	.083	.204					
5/16	.058	.055						7/8	.035	.109					
3/8	.022	.029						7/8	.049	.149					
3/8	.028	.036						7/8	.058	.175					
3/8	.035	.044						7/8	.065	.194					
3/8	.049	.059						1	.035	.125					
3/8	.058	.068						1	.049	.172					
3/8	.065	.074						1	.058	.202					
7/16	.035	.052						1	.065	.224					
7/16	.049	.070						1	.083	.281					
7/16	.065	.089						1	.095	.358					
1/2	.028	.049						1 1/8	.035	.141					
1/2	.035	.060						1 1/8	.058	.228					
1/2	.049	.082						1 1/8	.065	.255					
1/2	.058	.095													
1/2	.065	.104													

Colored bars or notes in columns indicate items stocked

DIMENSIONS—INCHES		EST WT PER FT, LBS	ALLOYS AND TEMPER					DIMENSIONS—INCHES		EST WT PER FT, LBS	ALLOYS AND TEMPER				
A	t		3003-H14	3003-H18	2024-T3	5052-O	6061-T6	A	t		3003-H14	3003-H18	2024-T3	5052-O	6061-T6
1¼	.035	.157						2	.032	.233					
1¼	.049	.217						2	.035	.254					
1¼	.058	.256						2	.049	.353					
1¼	.065	.284						2	.058	.416					
1¼	.083	.357						2	.065	.464					
1⅜	.035	.173						2	.083	.589					
1⅜	.042	.207						2	.125	.866					*
1⅜	.058	.282						2	.250	1.616					*
1½	.035	.189						2¼	.049	.398					
1½	.042	.221						2¼	.065	.520					
1½	.049	.263						2¼	.083	.660					
1½	.058	.309						2½	.035	.319					
1½	.065	.344						2½	.049	.443					
1½	.083	.434						2½	.065	.580					
1½	.125	.635						2½	.083	.740					
1½	.250	1.155						2½	.120	1.055					*
1⅝	.035	.206						2½	.125	1.097					*
1⅝	.058	.336						2½	.250	2.078					*
1¾	.035	.222						3	.065	.700					
1¾	.049	.308						3	.083	.890					
1¾	.058	.363						3	.120	1.277					*
1¾	.065	.404						3	.125	1.328					*
1¾	.083	.510						3	.250	2.540					*
1⅞	.058	.389						6	.188	4.040					

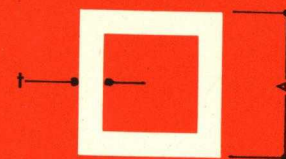
* extruded

** 16', 18', 20' lengths also

tube

square tube (extruded)—sharp corners

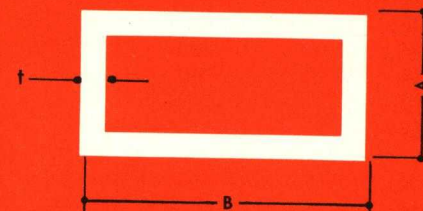
ALLOY 6063-T5
LENGTH—21' 1"



DIMENSIONS—INCHES		EST WT PER FT, LBS
A	t	
3/4	.125	.376
1	.125	.526
1 1/4	.125	.674
1 1/2	.125	.825
1 3/4	.125	.974
2	.125	1.126

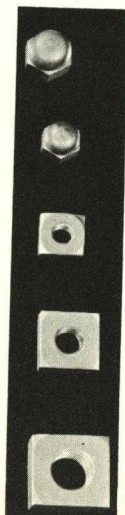
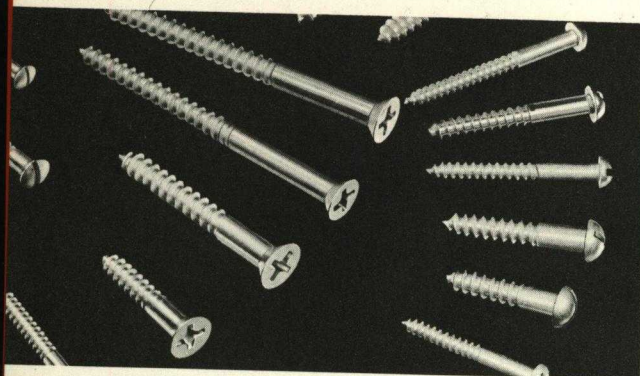
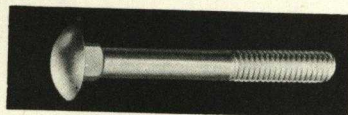
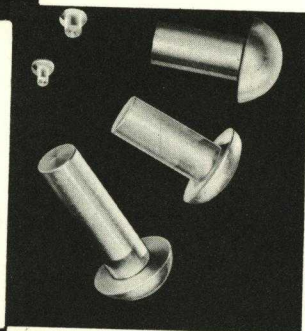
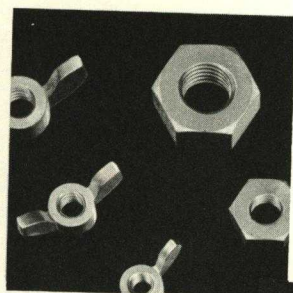
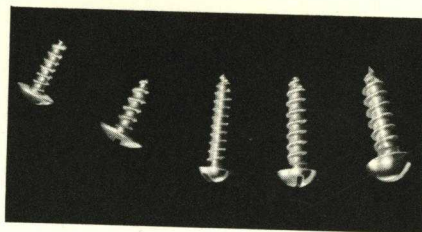
rectangular tube (extruded)—sharp corners

ALLOY 6063-T5
LENGTH—21' 1"



DIMENSIONS—INCHES			EST WT PER FT, LBS
A	B	t	
1/2	1	.125	.383
3/4	1 1/2	.125	.604
1	1 1/2	.125	.677
1	2	.125	.824
1 1/4	2 1/2	.125	1.045
1 1/2	2	.125	.971
1 3/4	3	.125	1.339
1 3/4	3 1/2	.125	1.486
1 3/4	4	.125	1.633
1 3/4	4 1/2	.125	1.780
1 3/4	5	.125	1.927
2	3	.125	1.412
2	5	.125	2.000

ALCOA ALUMINUM
fasteners



fasten aluminum with aluminum! Fasteners of Alcoa Aluminum are carefully engineered and have a long record of performance under the most exacting conditions. Fasteners made from high strength alloys developed by Alcoa withstand tightening pressures, torsion and vibration with a low incidence of fatigue failures. Joints will remain tight and stain-free even in industrial and seacoast atmospheres, where metals are especially subject to corrosive attack. The range of types and sizes of aluminum fasteners that can be produced or that are carried in warehouse stocks assures the designer freedom of design and availability of adequate stocks. The following pages summarize briefly sizes that can be produced. A large and varied stock is maintained by Alcoa warehouses.



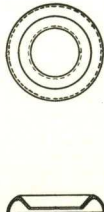
bolts

ALLOY 2024-T4
FINISHES: BRIGHT
ALUMILITE

nuts

washers

FINISHING



for screw sizes:
nos. 6, 8, 10, 12, 14

105

screws

machine screws

SLOTTED OR PHILLIPS HEAD
ALLOY 2024-T4
FINISH—BRIGHT

ROUND
HEAD



FLAT
COUNTERSUNK



OVAL
COUNTERSUNK



TRUSS
HEAD



JACKSON HEAD



slotted and Phillips recessed head types available

sizes: nos. 6, 8, 10, $\frac{1}{4}$ ", $\frac{5}{16}$ ", $\frac{3}{8}$ "
lengths: $\frac{3}{16}$ " to 2" in size no. 6
 $\frac{3}{8}$ " to 2" in $\frac{3}{8}$ " diameter
with corresponding range
for intermediate sizes.

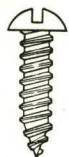
lengths increase in increments of $\frac{1}{8}$ " between $\frac{1}{2}$ " and $1\frac{1}{4}$ "
in increments of $\frac{1}{4}$ " between $1\frac{1}{4}$ " and 2"

limited range of sizes
available from stock

sheet metal screws

SLOTTED OR PHILLIPS HEAD
GIMLET OR BLUNT POINT
ALLOY 2024-T4
FINISHES: BRIGHT
ALUMILITE

ROUND
HEAD



FLAT
COUNTERSUNK



OVAL
COUNTERSUNK



TRUSS
HEAD



PAN-
HEAD



head and point types available

SLOTTED
HEAD



PHILLIPS
RECESSED HEAD



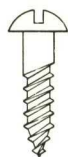
Type "A"
GIMLET POINT

Type "B"
BLUNT POINT

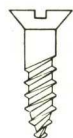
sizes: nos. 4, 6, 7, 8, 10, 12, 14
lengths: $\frac{1}{4}$ " to $\frac{1}{2}$ " in size no. 4
 $\frac{1}{2}$ " to $1\frac{1}{2}$ " in size no. 14
with corresponding range
for intermediate sizes.

lengths increase in increments of $\frac{1}{8}$ " up to 1"
in increments of $\frac{1}{4}$ " between 1" and 2"

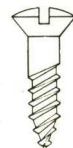
ROUND
HEAD



FLAT
COUNTERSUNK



OVAL
COUNTERSUNK



slotted and Phillips recessed head types available

sizes: nos. 4, 5, 6, 7, 8, 9, 10, 12, 14
lengths: $\frac{3}{8}$ " to 1" in size no. 4
1" to 3" in size no. 14
with corresponding range
for intermediate sizes.

lengths increase in increments of $\frac{1}{8}$ " up to 1"
in increments of $\frac{1}{4}$ " between 1" and 3"

INDUSTRIAL ROOFING NAIL
WITH NEOPRENE WASHER APPLIED



Size: .135" diameter x $2\frac{1}{2}$ " length.

.153" diameter nail available from stocks
carried at Alcoa works, Alcoa, Tenn.

FELT
ROOFING NAIL



Size: .135" diameter
x 1" length.

A wide range of sizes in the following
nail types are available from stock.

Common
Wood Siding (Sinker Head; Casing Head)
Asbestos Shingle (Face; Plain)
Cedar Shingle
Escutcheon Pins
Cedar Shake
Insulated Siding
Roofing
Roofing nails with neoprene washers
Gypsum Lathe
Shingle (general purpose)

screws

wood screws

SLOTTED OR PHILLIPS HEAD
ALLOY 2024-T4
FINISH—BRIGHT

nails

ALLOY 6061-T913
FINISH—ETCHED

rivets

regular

ALLOYS: 1100-F
3003-F
2017-T4
2117-T4
2024-T4
6053-T61
5056-H32
6061-T6
7277-T4

FINISHES: PLAIN
ALUMILITE

FLAT
HEAD



ROUND
HEAD



UNIVERSAL
HEAD



MUSHROOM
HEAD



BRAZIER
HEAD



BUTTON
HEAD



78° FLAT
COUNTERSUNK



78° OVAL
COUNTERSUNK



sizes: $\frac{1}{16}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$,
 $\frac{3}{4}$ " diameters

lengths: $\frac{1}{16}$ " to $1\frac{1}{4}$ " in $\frac{1}{16}$ " diameter
 $\frac{1}{2}$ " to 4" in $\frac{3}{4}$ " diameter
Lengths up to $5\frac{1}{2}$ " are available
in intermediate sizes.

lengths increase in increments of $\frac{1}{16}$ " up to $\frac{3}{4}$ "
in increments of $\frac{1}{8}$ " between $\frac{3}{4}$ " and $1\frac{1}{2}$ "
in increments of $\frac{1}{4}$ " between $1\frac{1}{2}$ " and $5\frac{1}{2}$ "

100° FLAT
COUNTERSUNK



60° OVAL
COUNTERSUNK



MODIFIED
BRAZIER



sizes: comparable to those listed above but fewer in number

tinnern rivets

ALLOYS: 1100-F
3003-F
FINISH—PLAIN

ALLOY—2117-T4
FINISH—ALUMILITE



sizes: 8 oz, 12 oz, 1 lb, $1\frac{1}{4}$, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3,
4, 5, 6, 8, 10, 12, 14, 16 lb

lengths: $\frac{1}{16}$ " to $1\frac{1}{4}$ " in 8 oz.
 $\frac{1}{4}$ " to $1\frac{1}{4}$ " in 16 lb
with corresponding range for interme-
diate sizes

Semi-Tubular Rivets—consult Alcoa sales office

Note: Many other sizes and types are stocked by Alcoa Distributors.

joining materials

welding

Welding filler metal—rod and wire—in various alloys for inert gas metal arc, tungsten arc, torch and other specialized welding, as well as suitable fluxes, is available from warehouse stock. Also carried is consumable electrode wound on 10-pound spools for use in all semiautomatic and automatic consumable electrode equipment currently being manufactured.

For general-purpose welding of architectural alloys, welding rod 4043 is recommended, provided no Aluminite treatment is required. For special-purpose welding, such as on No. 32 Aluminite Sheet or on alloy 6063 which requires later Aluminite finishing, welding rod 5356 should be used.

More detailed information on welding techniques will be found in the handbook, *Welding Alcoa Aluminum*.

brazing

Brazing filler wire, shim stock in sheet form, brazing sheet, stop-off materials and fluxes for torch, flux bath and furnace brazing are available to meet almost all specialized types of joining needed. For details, see handbook, *Brazing Alcoa Aluminum*.

soldering

Alcoa No. 804 Solder Wire and No. 64 Solder Flux are obtainable from stocks carried by warehouses and jobbers.

thread lubricant

Alcoa Thread Lubricant designed especially for use with any threaded aluminum connection, such as screws, bolts or pipe. Available in 8-oz. jars.

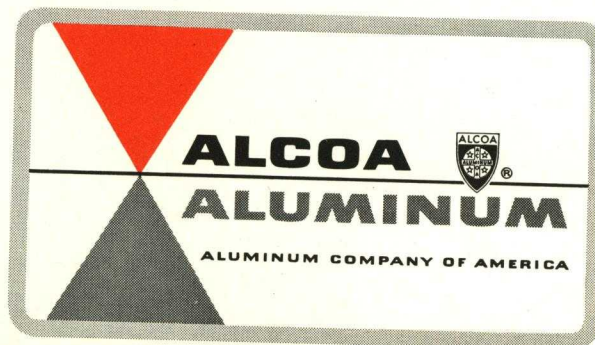
ALCOA ALUMINUM

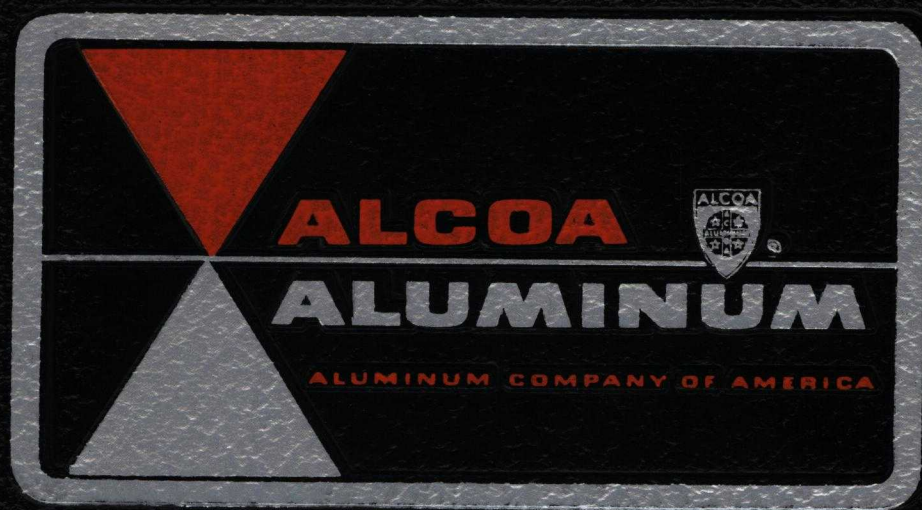
**specialty
products**

Alcoa sales offices

ABERDEEN, S. D. 304 Western Union Building
 AKRON 8, OHIO 506 Akron Savings & Loan Building
 ALBANY 7, N. Y. 90 State Street
 ALLENTOWN, PA. 1132 Hamilton Street
 ATLANTA 9, GA. 1615 Peachtree Street
 BALTIMORE 2, MD. Commercial Credit Building
 BIRMINGHAM 2, ALA. P. O. Box 2041
 BOSTON 16, MASS. 20 Providence Street, Park Square
 BRIDGEPORT 4, CONN. Atlantic Street
 BUFFALO 7, N. Y. 1880 Elmwood Avenue
 CHARLOTTE 2, N. C. 616 Johnston Building
 CHATTANOOGA 2, TENN. 1205 Volunteer Building
 CHICAGO 11, ILL. 520 North Michigan Avenue
 CINCINNATI 6, OHIO 2331 Victory Parkway
 CLEVELAND 13, OHIO 1450 Terminal Tower
 COLUMBUS 15, OHIO 40 South Third Street Building
 DALLAS 2, TEXAS 301 Thomas Building
 DAVENPORT, IOWA 503 Kahl Building
 DAYTON 5, OHIO 207 Northtown Arcade
 DENVER 6, COLO. 105 Fillmore Street
 DETROIT 2, MICH. 610 New Center Building
 EVANSVILLE 8, IND. 207 Kinkel Building
 FORT WAYNE, IND. 930 Lincoln Bank Tower
 GARDEN CITY, N. Y. 970 Franklin Avenue
 GRAND RAPIDS 2, MICH. 812 Michigan National Bank Building
 HARTFORD 3, CONN. Capitol Building, 410 Asylum Street
 HOUSTON 2, TEXAS 1804 Commerce Building
 INDIANAPOLIS 7, IND. 2939 North Meridian Street
 JACKSON, MICH. 1405 National Bank Building
 KANSAS CITY 5, MO. 2300 Power & Light Building
 LOS ANGELES 17, CALIF. 1145 Wilshire Boulevard
 LOUISVILLE 2, KY. 1154 Starks Building
 MEMPHIS 3, TENN. 1520 Sterick Building

MIAMI 32, FLA. 1605 Alfred I. du Pont Building
 MILWAUKEE 3, WIS. 2040 West Wisconsin Avenue
 MINNEAPOLIS 2, MINN. 1060 Northwestern Bank Building
 NEWARK 2, N. J. 744 Broad Street
 NEW ORLEANS 12, LA. 627 Whitney Building
 NEW YORK 17, N. Y. 230 Park Avenue
 OKLAHOMA CITY 2, OKLA. 111 N.W. 23rd Street
 OMAHA 2, NEBR. 746 Omaha National Bank Building
 PEORIA, ILL. 725 Commercial Bank Building
 PHILADELPHIA 9, PA. 123 South Broad Street
 PITTSBURGH 19, PA. 1501 Alcoa Building
 PONTIAC 15, MICH. 301 Pontiac State Bank Building
 PORTLAND 4, ORE. 1115 U. S. National Bank Building
 PROVIDENCE 3, R. I. 2503 Industrial Bank Building
 RICHMOND 19, VA. 712 Southern States Building
 ROCHESTER 18, N. Y. Erdle Building
 ST. LOUIS 8, MO. 10th Floor, Continental Building
 SAN FRANCISCO 4, CALIF. 2509 Equitable Life Building
 SEATTLE 1, WASH. 1411 Fourth Avenue Building
 SOUTH BEND 1, IND. 805 J.M.S. Building
 SPOKANE 1, WASH. 610 Fidelity Building
 SPRINGFIELD 3, MASS. 508 Tarbell-Watters Building
 SYRACUSE 3, N. Y. 731 James Street
 TAMPA 2, FLA. 820 First National Bank Building
 TOLEDO 4, OHIO 1801 Owens-Illinois Building
 WASHINGTON 6, D. C. 1200 Ring Building
 WICHITA 2, KAN. 1011 Central Building
 WILMINGTON 1, DEL. 1402 Delaware Trust Building
 WORCESTER 8, MASS. 22 Pleasant Street
 YORK, PA. 205 Manufacturers Building
 YOUNGSTOWN, OHIO 537 Ohio Edison Building
 EXPORT DIVISION 230 Park Avenue, New York 17, N. Y.





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